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AIRCRAFT COMPATIBILITY AND EVALUATION OF THE MARK 7 MOD 3 ARRESTING GEAR (7 June 1967 through 24 June 1968)

Final Report
7 August 1968

by

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and

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Recovery Division

Prepared under Naval Air Systems Command
AIRTASK Numbers A05-537-014/204/1/W-4503-08, Work Unit No. 56 and
A05-537-007/204/1/W-4503-05, Work Unit No. 02

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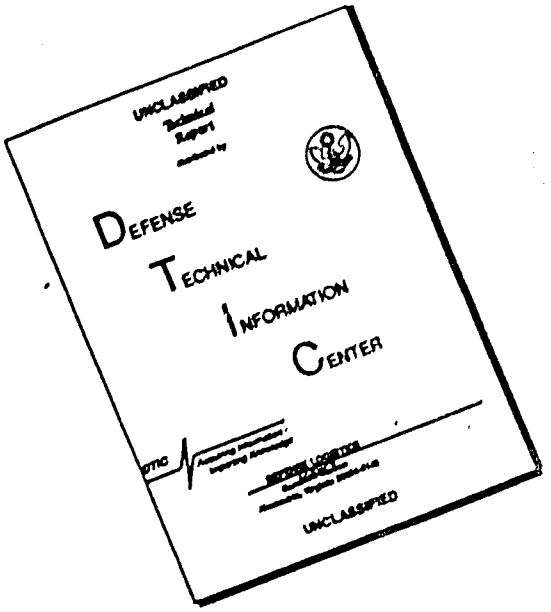

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U. S. NAVAL AIR TEST FACILITY
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LAKEHURST, NEW JERSEY
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Report NATF-EN-1100

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ABSTRACT

This report presents results of tests conducted with the Mark 7 Mod 3 arresting gear to determine aircraft compatibility and evaluate arresting-gear performance. Instrumented A-3A, A-4B, F-4A, and F-8D aircraft were utilized in the test program. Test data was obtained for use in the preparation of aircraft recovery bulletins for the USS JOHN F. KENNEDY (CVA67) and to insure compatibility of current fleet aircraft with the Mark 7 Mod 3 arresting gear.

Testing was conducted with three basic arresting-gear configurations/operating modes: (1) arresting gear with sheave dampers, using actual weight settings; (2) arresting gear without sheave dampers, using actual weight settings; and (3) arresting gear with sheave dampers, using single weight settings.

Compatibility with A-3A and A-4B aircraft and qualified compatibility with F-4A and F-8D aircraft has been established.

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I INTRODUCTION

A. The Naval Air Test Facility (Ship Installations) (NATF(SI)) was authorized by references (a) and (b) to conduct tests with the Mark 7 Mod 3 arresting gear to determine aircraft compatibility and evaluate arresting-gear performance. Aircraft testing commenced on 7 June 1967, and concluded on 24 June 1968. Instrumented A-3A, A-4B, F-4A, and F-8D aircraft were used for a total of 244 arrestments.

B. The purpose of the test program was to obtain arresting-gear performance data required to prepare aircraft recovery bulletins, and to insure compatibility of current fleet aircraft with the Mark 7 Mod 3 arresting gear.

II TEST EQUIPMENT AND PROCEDURES

A. Arresting-Gear Configurations: The Mark 7 Mod 3 arresting gear at NATF(SI) was utilized for all test events, and was configured as follows:

1. Reeving: 1-3/8-inch-diameter regular Lang-lay purchase cable, NAEC PN A-92791-27, with an 18:1 reeve ratio

2. Deck span: 120 feet with crossdeck pendant, PN 507306-110-0

3. Cam: K-31

4. Weight-selector dial: NAEC PN 316152-1

5. 28-inch-diameter fairlead sheave

6. Cam-chain initial tension: 400 pounds

7. Accumulator initial pressure: 400 psi

8. Cam torque: 90 ± 20 foot-pounds

9. Port and starboard sheave dampers, configured as follows:

   a. Control-flow orifice, damper end: 3 inches in diameter

   b. Return-flow flapper orifice, damper end: 3/8 inch in diameter

   c. Return-flow flapper orifice, accelerator end: 1/2 inch in diameter

   d. Damper accumulator initial pressure: 750 psi

   e. Accelerator accumulator initial pressure: 20 psi

   f. Fluid levels in the damper and the accelerator accumulator: 2 inches

10. Port and starboard anchor dampers were configured as follows:

    a. Control-flow orifice, operating end: Inner reeve, 2 inches in diameter
       Outer reeve, 7/8 inch in diameter

b. Return-flow flapper orifice, operating end: 1/2 inch in diameter

c. Buffer control flow orifice: 5/8 inch in diameter

d. Damper piston rod, operating end (steel): 3-7/8 inches in diameter

e. Operating piston, PN 410295-1

B. Aircraft Configurations: Aircraft external stores configurations were as indicated on the tabulated data sheets, Appendix B, and are summarized as follows:

Aircraft	Configuration
A-3A	Clean
A-4B	300-gallon centerline and two 300-gallon wing tanks
F-4A	(1) clean (2) two 370-gallon wing tanks (3) 600-gallon centerline and two 370-gallon wing tanks
F-8D	Clean

C. Test Operating Modes

1. Aircraft tests were programmed to provide aircraft recovery-bulletin data for three basic Mark 7 Mod 3 arresting-gear configurations/operating modes:

a. Arresting gear with sheave dampers

b. Arresting gear without sheave dampers

c. Arresting gear with sheave dampers, using a single weight setting

2. The following arresting-gear weight settings were utilized during the single-weight-setting tests:

Aircraft	Weight Setting (Lb)
A-3A	50,000
A-4B	14,500
F-4A	38,000
F-8D	25,000

3. Aircraft tests were conducted over the minimum to maximum shipboard arrested-landing-weight ranges of each aircraft for both ON-CENTER and 20-foot OFF-CENTER engaging positions.

D. Power Programming: The following power programming was used in an effort to insure that aircraft power was at military rated thrust (MRT) at wire pickup. By simulating the most stringent aircraft power conditions normally encountered during fleet recovery operations, this test procedure produces the maximum arresting-hook axial loads which normally occur.

1. Fly-in arrestments: Advance power to MRT as the aircraft touches down.

2. Roll-in and taxi-in arrestments: Advance power early enough in the approach to ensure that the engine(s) are at MRT at wire pickup.

3. Upon completion of landing roll out, reduce power to IDLE. Allow the aircraft to roll aft until the arresting-hook point clears the deck pendant.

E. Frequency Response: Data presented in this report is displayed at the following flat frequency responses:

Parameter	Flat Frequency Response (Hz)
Arresting-hook axial load	60
Aircraft longitudinal deceleration	20
Arresting-gear cable tensions	
A-3 (Tabulated data - Appendix B)	60
A-3 (Performance comparison - Figures 21 through 23)	60, 160 and 330
A-4, F-4, and F-8 (Tabulated data - Appendix B)	330
A-4, F-4, and F-8 (Performance comparison - Figures 24 through 29)	60 and 330
Arresting-gear cylinder pressure	600
Aircraft engine RPM	5

III TEST RESULTS AND DISCUSSION

A. Test Data: Values of aircraft arresting-hook axial loads, aircraft longitudinal decelerations, arresting-gear cable tensions, and arresting-gear engine-cylinder pressures were obtained by reducing data on a digital computer.

1. Plots of the peak aircraft and arresting-gear performance parameters listed above versus engaging speed are presented in Figures 1 through 16.

2. Performance parameters listed above have been plotted against time and stroke for representative events and are presented in Appendix A.

3. Tabulated data for each test event is presented in Appendix B.

B. Test Results

1. The maximum allowable aircraft engaging speed for each aircraft and arresting-gear parameter for both ON-CENTER and 20-foot OFF-CENTER arrestments are listed in Table I. These limits are based on the speed required to obtain the maximum allowable values for the parameters listed and have been obtained either directly or extrapolated from the test data presented in Figures 1 through 16. Mark 7 Mod 3 arresting-gear performance is satisfactory within these limits.

TABLE I

Aircraft Type	Aircraft Weight Range (1,000 Lb)	Arresting-Gear Config/Mode*	Maximum Engaging Speed (Knots) ON-CENTER/20-Foot OFF-CENTER: Arresting-Hook Axial Load	Long. Decel	Cable Tension	Engine-Cylinder Pressure
A-3A	48.0 - 50.0	WSD	137/133	153/149	130/118	132/128
		W/O SD	137/133	153/149	130/118	132/128
	40.0 - 42.0	WSD	156/146	158/153	145/130	145/137
		SWS-WSD	150/145	151/146	141/133	141/138
		W/O SD	151/143	152/144	142/130	142/136
A-4B	13.5 - 14.5	WSD	138/133	145/140	160/157	170+/170+
		W/O SD	124/134	131/135	143/138	170+/170+
	11.5 - 12.5	WSD	142/137	142/135	158/162	170+/170+
		SWS-WSD	140/135	140/133	169/165	170+/170+
		W/O SD	124/134	123/134	147/138	170+/170+
F-4A	31.0 - 33.0	WSD	133/129	145/140	151/140	152/149
		SWS-WSD	131/126	133/128	155/147	153/149
		W/O SD	130/125	130/125	139/130	149/146
F-8D	20.0 - 22.0	WSD	156/159	160/163	163/168	170+/170+
		SWS-WSD	163/161	167/165	170/167	170+/170+
		W/O SD	150/148	155/153	140/134	170+/170+

* WSD = with sheave dampers; W/O SD = without sheave dampers; SWS-WSD = single weight setting, with sheave dampers.

2. Table I shows that aircraft maximum allowable engaging speeds, based on any one of the four parameters evaluated, are usually lower for 20-foot OFF-CENTER arrestments than those for ON-CENTER arrestments. For heavyweight A-3A (48,000 to 50,000 pounds) aircraft arrestments 20 feet OFF-CENTER, arresting-gear cable tension is the critical parameter (96,000-pound tension limit) and it imposes a 10-knot reduction in engaging speed as determined by the next most critical parameter, arresting-gear engine-cylinder pressure (10,000-psi limit). Extrapolation of A-3A/Mark 7 Mod 3 purchase-cable tension data indicates that this 10-knot loss in engaging speed could be regained if the cable-tension limit were extended to 110,000 pounds for 20-foot OFF-CENTER arrestments.

a. A review of references (c), (d), and (e), Statistical Presentations of Landing Parameters, indicates that shipboard landings of various type aircraft 20 feet OFF-CENTER constitutes a rare event. Consideration of the functional relationships among engaging speeds, cable tensions, and OFF-CENTER distances along with the probabilities of landing at various OFF-CENTER distances, the cable-tension safety factor, and cable fatigue life could provide aircraft recovery-bulletin cable-tension limits close to the ON-CENTER limits of Table I.

3. When the arresting gear was configured without sheave dampers, higher aircraft and arresting-gear loads were recorded during arrestments of all aircraft tested except the A-3. Loads recorded during arrestments of the heavyweight (48,000 to 50,000 pounds) A-3 aircraft were identical to those obtained when the gear was configured with sheave dampers.

4. Review of single-weight-setting and actual weight setting test data indicates that the present Mark 7 Mod 3 arresting-gear weight setting dial is not well matched to all aircraft types tested. It is reasoned that an optimum arresting-gear weight setting dial should consistently provide somewhat lower recovery loads (higher allowable engaging speeds) for actual weight settings than for single-weight settings. For the F-8 aircraft the opposite is generally true, that is, for ON-CENTER tests the maximum allowable engaging speed, based on either hook load or cable tension (Table I), is seven knots lower for actual than for single-weight settings. A further indication of an arresting-gear weight dial mismatch to individual aircraft types is evidenced by the arresting-gear pressure/stroke histories of Appendix A. Comparison of single and actual weight setting pressure/stroke histories for each aircraft type tested shows the following:

a. F-8 Aircraft: The cylinder pressure peaks toward the end of the stroke (underset condition) when using actual aircraft weight setting, but is approximately constant (on-setting condition) for the single weight setting.

b. F-4 Aircraft: The cylinder pressure peaks toward the end of the stroke (underset condition) when using the actual weight setting, and shows a slight peaking in the beginning of the stroke (slight overset condition) for the single weight setting.

c. A-3 Aircraft: For lightweight (41,000 pounds) aircraft arrestments, the cylinder pressure peaks toward the end of the arrestment (slight underset condition) when using the actual weight setting, and peaks in the beginning of the stroke (overset condition) for the single weight setting. For heavyweight (50,000 pounds) aircraft arrestments the cylinder pressure is fairly uniform from pressure buildup to pressure drop-off (on-setting condition).

d. A-4 Aircraft: For lightweight (12,000 pounds) aircraft arrestments the cylinder pressure tends to peak just after pressure buildup (very slight overset) for both single weight setting and actual weight setting, and for heavyweight (14,000 pounds) aircraft arrestments cylinder pressure is uniform (on-setting condition) from pressure buildup to drop-off.

5. The demonstrated arresting-gear capacity of 44.2 million foot-pounds based on a 10,000-psi limiting engine-cylinder pressure, or 43.0 million foot-pounds based on a 96,000-pound limiting cable-tension load,

is less than the design goal of 47.5 million foot-pounds. Some improvement in performance could be obtained by the development of a new cam with an increased pressure rise rate to allow more aircraft energy to be absorbed earlier in the stroke. The present K-31 cam is less than optimum; however, it is acceptable for initial use with the Mark 7 Mod 3 in the fleet.

C. Aircraft Performance

1. The F-8 aircraft arresting hook became disengaged from the crossdeck pendant during high-speed (approximately 140 knots) OFF-CENTER arrestments into the Mark 7 Mod 3 arresting gear configured without sheave dampers (events 23099, 23100, 23101, 23108, and 23109). Review of high-speed camera coverage for each event revealed that the crossdeck pendant was seated in the hook-point throat just prior to pendant shedding. (See Figure 17, view A.) It appears that the transverse wave (kink wave) reflected from the closest deck sheave twisted the hook shank 30 to 40 degrees, causing the crossdeck pendant to shed from the hook point (see Figure 17, views B and C). Figure 18 is a sample time history showing the oscillations in arresting-hook, longitudinal-deceleration, and cable-tension loads that occur when the hook twists and sheds the pendant. During event 23109, the arresting-hook up-latch mechanism bumper pad and overtravel stop were damaged when the hook impacted the fuselage while twisted approximately 40 degrees (see Figure 17, view C); view D of Figure 17 shows the broken bumper pad that damaged the tail section of the aircraft during the following event. Additional arrestments (events 23250 through 23265) were conducted into the arresting gear configured with sheave dampers, using both actual and single weight settings, to determine the extent of this problem. No premature pendant shedding occurred. Only two low-speed arrestments (110 and 123 knots) were conducted into the Mark 7 Mod 3 arresting gear in this configuration. These arrestments in conjunction with Mark 7 Mod 2 arresting-gear experience indicate that premature pendant shedding probably will not occur below an engaging speed of about 120 knots. Through film analysis, the problem is considered peculiar to high-speed OFF-CENTER arrestments of the F-8 aircraft into the Mark 7 Mod 3 arresting gear configured without sheave dampers.

2. The F-8D aircraft arresting hook also became disengaged from the crossdeck pendant during event 21778--the arresting gear was configured with sheave dampers. Film coverage was not available for this event; however, analysis of the data trace indicates that pendant shedding probably occurred as a result of the aircraft porpoising at wire pickup, causing the pendant to be picked up by only the tip of the arresting-hook point.

3. The F-8D nose-gear steering stud, PN 548527-1, failed during one 20-foot-to-port arrestment (event 22079). This failure is not attributed to Mark 7 Mod 3 arresting-gear performance.

4. An excessive number of A-3 aircraft arresting-hook bumpers, PN 4545527-501, required replacement during 20-foot OFF-CENTER arrestments. Investigation of this problem revealed that the clearance between the arresting-hook-shank metal bumper, PN 3545538, and arresting-hook-well bumper was out of the specified tolerance.

5. A series of F-4A aircraft fly-in arrestments, Appendix C, were conducted to determine the incidence of aircraft stabilator/crossdeck pendant contact. Approaches were flown in accordance with NATOPS procedures and utilized a Fresnel Lens Optical Landing System set for a three-degree glide slope. Six arrestments were programmed with the arresting-hook touchdown point 60 feet before the crossdeck pendant and five arrestments with the touchdown point ten feet before the crossdeck pendant. The landing procedure consisted of the power programming listed in paragraph II D, and positioning the stick full aft at touchdown. During three of the five arrestments programmed for a ten-foot touchdown point, the crossdeck pendant struck the stabilator leading edge and inflicted minor damage. Similar contact with slotted stabilators of later-model F-4 aircraft would probably have inflicted damage requiring replacement. Analysis of motion-picture coverage indicates that stabilator/pendant contact is associated with high aircraft pitch attitude at wire pickup. A rapidly moving transverse wave in the deck pendant induced at wire pickup, travels along the pendant, rises above and strikes the stabilator leading edge which, because of aircraft attitude, is still in close proximity to the deck. Figures 19 and 20 compare an arrestment with stabilator/pendant contact to one without stabilator/pendant contact and illustrate the significance of aircraft attitude.

6. All aircraft tested exhibited acceptable tracking during the runout for both ON-CENTER and 20-foot OFF-CENTER arrestments. For 20-foot port and starboard OFF-CENTER arrestments, aircraft generally track slightly in towards the centerline with a final stopped position of approximately 15 to 17 feet OFF-CENTER.

D. Frequency-Response Characteristics of Cable Tensions

1. Analysis of Mark 7 Mod 3 arresting-gear purchase-cable tensions recorded during A-3A aircraft arrestments revealed that with data obtained at the standard flat-frequency response of 330 cycles per second (Hz), an extraneous high-frequency signal greater than 600 Hz occurs in the cable-tension instrumentation (three-sheave tensiometers). This high-frequency signal is confined locally to the three-sheave-tensiometer instrumentation and is not evident in other data parameters. The signal is attributed to the interaction of the cable wrap-around angle with the three-sheave-tensiometer sheave and the external pattern of the cable weave. The extraneous high-frequency signal becomes significantly evident only for high-speed/high-energy arrestments of the A-3A aircraft.

2. The presence of an extraneous higher frequency signal in the cable-tension data is evidenced by the obscuration of the cable-tension trace (Figure 21). One serious effect of this signal is the apparent amplification of maximum cable-tension values. For manual data reduction of a cable-tension trace of a high-speed A-3 aircraft test event, the data must be "faired" (an average line drawn between the maximum and minimum values of the high-frequency oscillation) in order to eliminate the amplifying effects of the spurious higher frequency signal. For a similar data reduction conducted on a digital computer, the cable-tension values obtained are the maximum recorded values scanned by the computer and are always higher than those obtained by manual fairing.

For example, maximum cable tensions displayed by the computer for standard 330 Hz data are 3,000 to 5,000 pounds higher than those determined by manually fairing 330 Hz data. This cable-tension difference is equivalent to a loss of approximately 3 knots in maximum allowable engaging speed based on cable tension.

3. In an attempt to analyze the amplifying effects of the extraneous signal on computer-reduced cable tensions, three separate computer data reductions were conducted for the same high-speed A-3A test event (No. 21650) by filtering the basic 330 Hz data to 160 Hz and 60 Hz (Figures 21, 22, and 23). Analysis of this data indicates that filtering to 60 Hz eliminates the amplifying effects of the high-frequency signal without significant alteration of the real cable tensions. The maximum values of the 60 Hz cable-tension data are in close agreement with those obtained by manual fairing of 330 Hz data and are considered appropriate for use in establishing operational performance limits. Also, the phase shift accompanying data filtering is negligible for 60 Hz data and should have no significant effect on time correlation with other data parameters.

4. Because of the above phenomena, all cable-tension values published in this report for A-3A aircraft test events are for a flat frequency response of 60 Hz.

5. Comparison of cable-tension data for A-4, F-4, and F-8 aircraft displayed at a flat frequency response of 60 Hz with that displayed at a response of 330 Hz shows that the maximum peak values differ by up to four percent (Figures 24 to 29). This range is considered to be less than the overall accuracy of the data recording/display system. Utilization of a 60 Hz flat frequency response eliminates most of the extraneous signals (noise) from the data, which permits easier and more consistent analysis.

IV CONCLUSIONS

1. The Mark 7 Mod 3 arresting system is considered satisfactory for service use within the limits outlined by Table I. (Section III, para B1)

2. The A-3A and A-4B aircraft are compatible with the Mark 7 Mod 3 arresting gear within the engaging-speed limits outlined by Table I. (Section III, para B1 and C6)

3. The F-8D aircraft is compatible with the Mark 7 Mod 3 arresting gear configured with sheave dampers within the engaging-speed limits outlined by Table I, but is not compatible with the Mark 7 Mod 3 arresting gear configured without sheave dampers at speeds in excess of 120 knots. (Section III, para B1, C1, and C6)

4. The F-4A aircraft is compatible with the Mark 7 Mod 3 arresting gear within the engaging-speed limits outlined by Table I except that minor aircraft stabilator damage can be expected. This damage may be more severe for F-4B/J aircraft equipped with slotted stabilators. (Section III, para B1 and C5)

5. Generally, maximum allowable aircraft engaging speeds for 20-foot OFF-CENTER arrestments are lower than those for ON-CENTER arrestments. (Section III, para B2)

6. Aircraft 20-foot OFF-CENTER engaging-speed reductions based on cable tensions can be alleviated, by increasing arresting-gear purchase-cable-tension limit from 96,000 to 110,000 pounds for OFF-CENTER recovery operations in conjunction with consideration of the expected frequency of 20-foot OFF-CENTER arrestments. (Section III, para B2)

7. A new arresting-gear weight setting dial is required for improved aircraft recovery performance. (Section III, para B4)

8. Some improvement in performance could be obtained by the development of a new control-valve cam profile. (Section III, para B5)

9. Use of 60 Hz flat frequency response for all aircraft/arresting-gear cable-tension data is preferable to the use of 330 Hz flat frequency response data because it eliminates most spurious signals (noise) and facilitates more consistent data analysis. (Section III, para D)

V RECOMMENDATIONS

1. Test data provided herein, along with aircraft data to be obtained from the CVA67, should be used for the preparation of aircraft recovery bulletins for the Mark 7 Mod 3 arresting gear.

2. The F-8 aircraft should be restricted from recovery operations when the Mark 7 Mod 3 arresting gear is configured without operating sheave dampers at speeds in excess of 120 knots.

3. Aircraft-recovery-bulletin cable-tension parameter limits should be less stringent for 20-foot OFF-CENTER operations because of the rare occurrence of an operational 20-foot OFF-CENTER arrestment. A progressive increase in cable-tension limits from 96,000 pounds for ON-CENTER to 110,000 pounds for 20-foot OFF-CENTER is recommended.

4. Provide a new arresting-gear weight setting dial with proper calibration.

5. Continue development of a new control-valve cam profile.

6. Adopt the use of a 60-cycle-per-second flat frequency response for cable-tension data for all future aircraft/arresting-gear test programs.

VI REFERENCES

(a) NAVAIRSYSCOM AIRTASK No. A05-537-014/204/1/W-4503-08, Work Unit No. 56

(b) NAVAIRSYSCOM AIRTASK No. A05-537-007/204/1/W-4503-05, Work Unit No. 02

(c) ASL Report No. NAEC-ASL-1074 of 1 Mar 1965: Statistical Presentation of Landing Parameters for Models A-3B, A-4C/E, F-4B, and RF-8A/F-8C Aircraft Aboard the USS MIDWAY (CVA-41) in the WESTPAC Area

(d) ASL Report No. NAEC-ASL-1090 of 18 Apr 1966: Statistical Presentation of Landing Parameters for Models F-4B, F-8E, RF-8A, A-3B, A-4C, A-4E, C-1A, and E-1B Aircraft Aboard the USS F. D. ROOSEVELT (CVA-42) Operating Off the East Coast of Florida

(e) ASL Report No. NAEC-ASL-1101 of 26 Jul 1966: Statistical Presentation of Landing Parameters for Models F-4B, A-4C, and RA-5C Aircraft Aboard the USS INDEPENDENCE (CVA-62) Operating in the North Atlantic

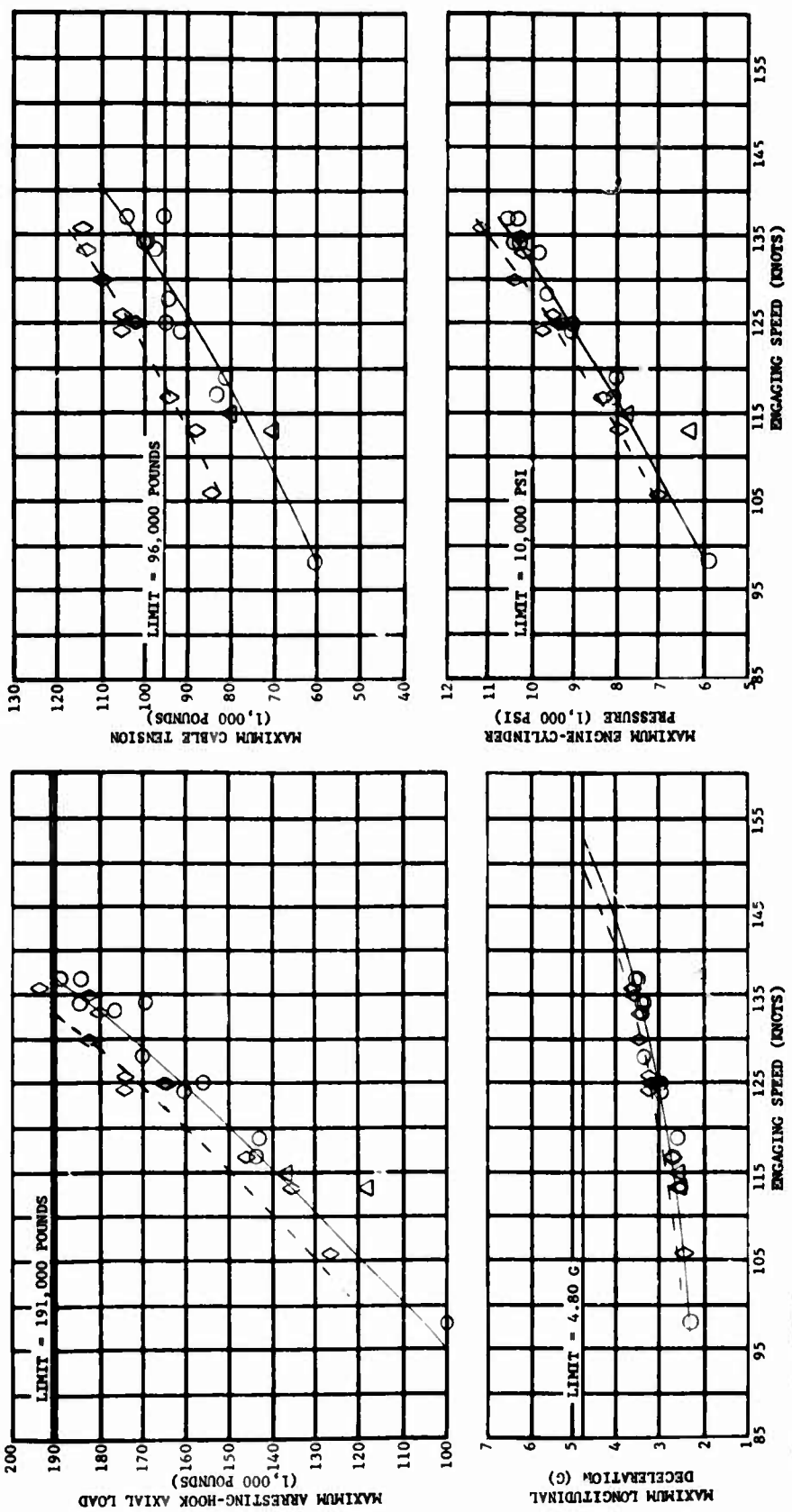


Figure 1 - Composite Graph of 48,000- to 50,000-Pound A-3A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using an Actual Weight Setting)

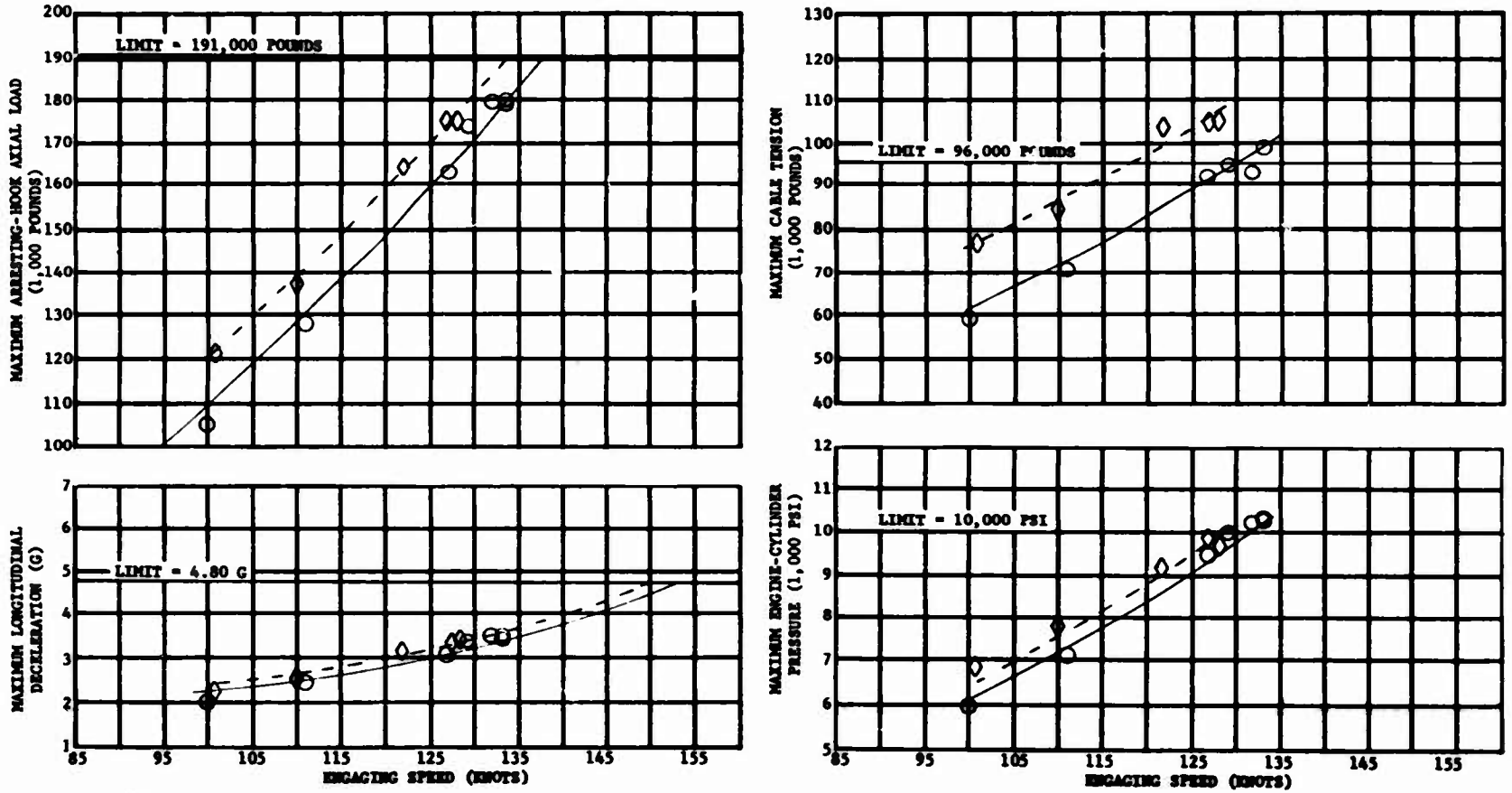


Figure 2 - Composite Graph of 48,000- to 50,000-Pound A-3A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers, Using an Actual Weight Setting)

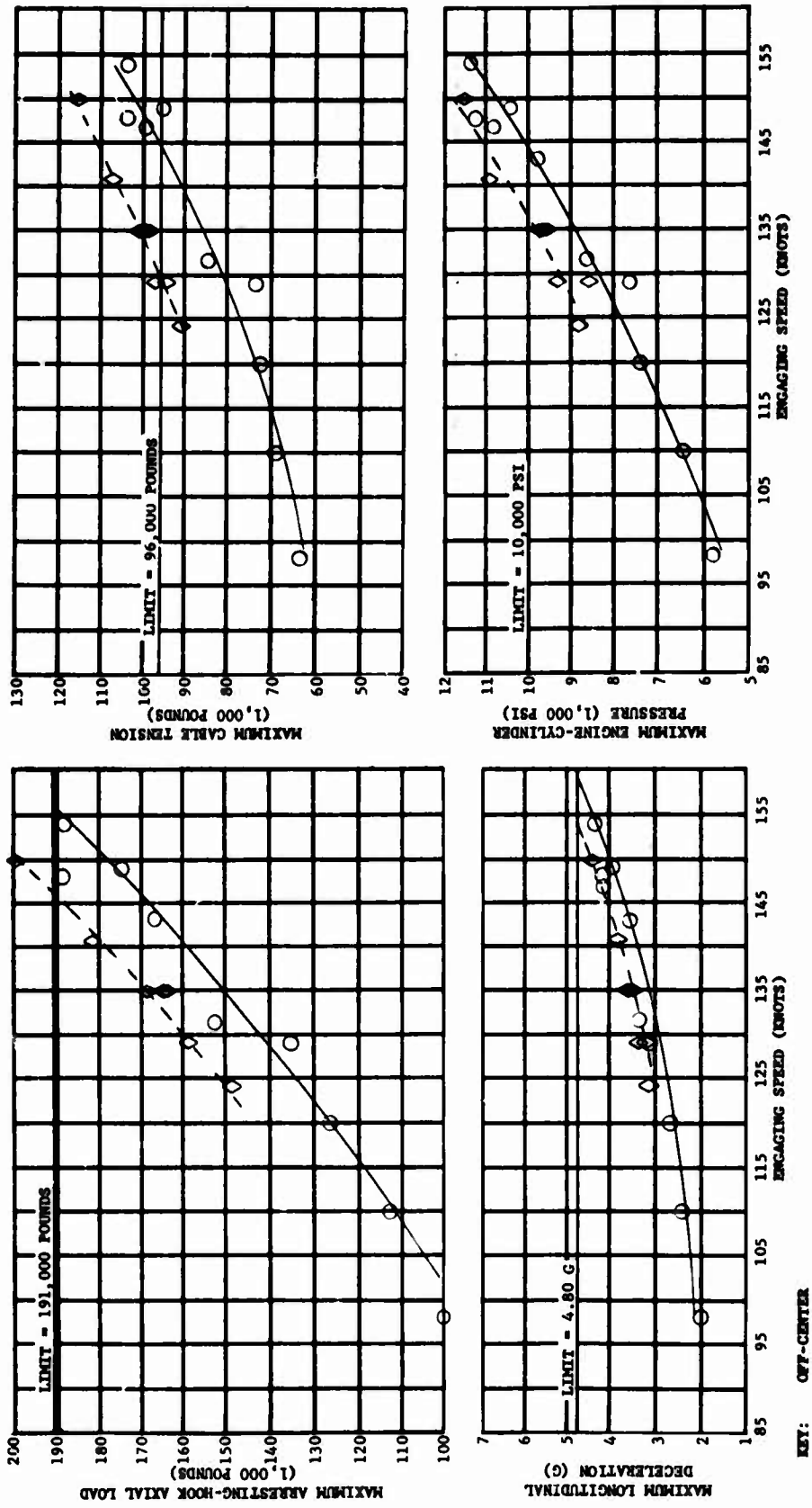


Figure 3 - Composite Graph of 40,000- to 42,000-Pound A-3A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using an Actual Weight Setting)

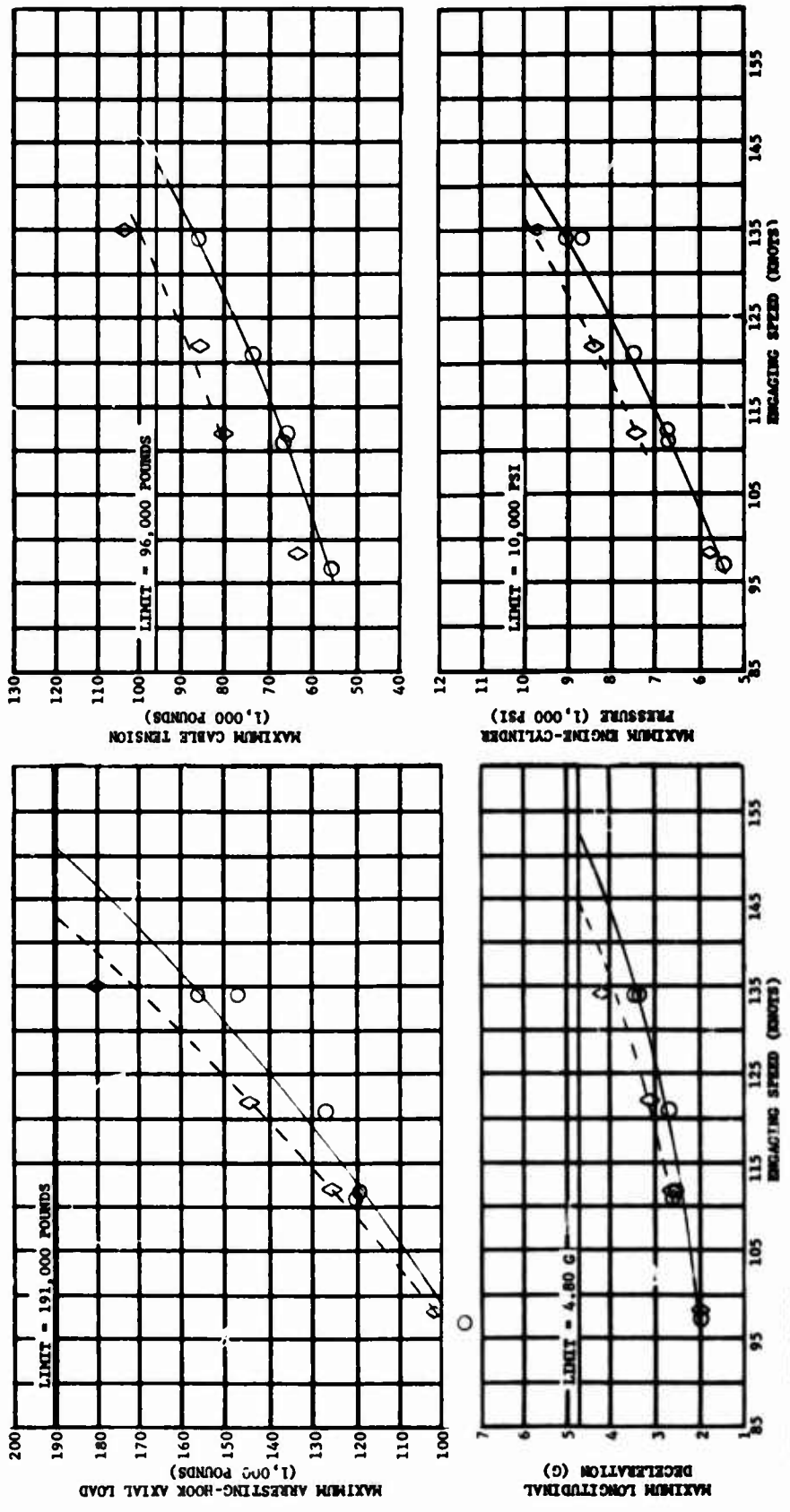


Figure 4 - Composite Graph of 40,000- to 42,000-Pound A-3A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers, Using an Actual Weight Setting)

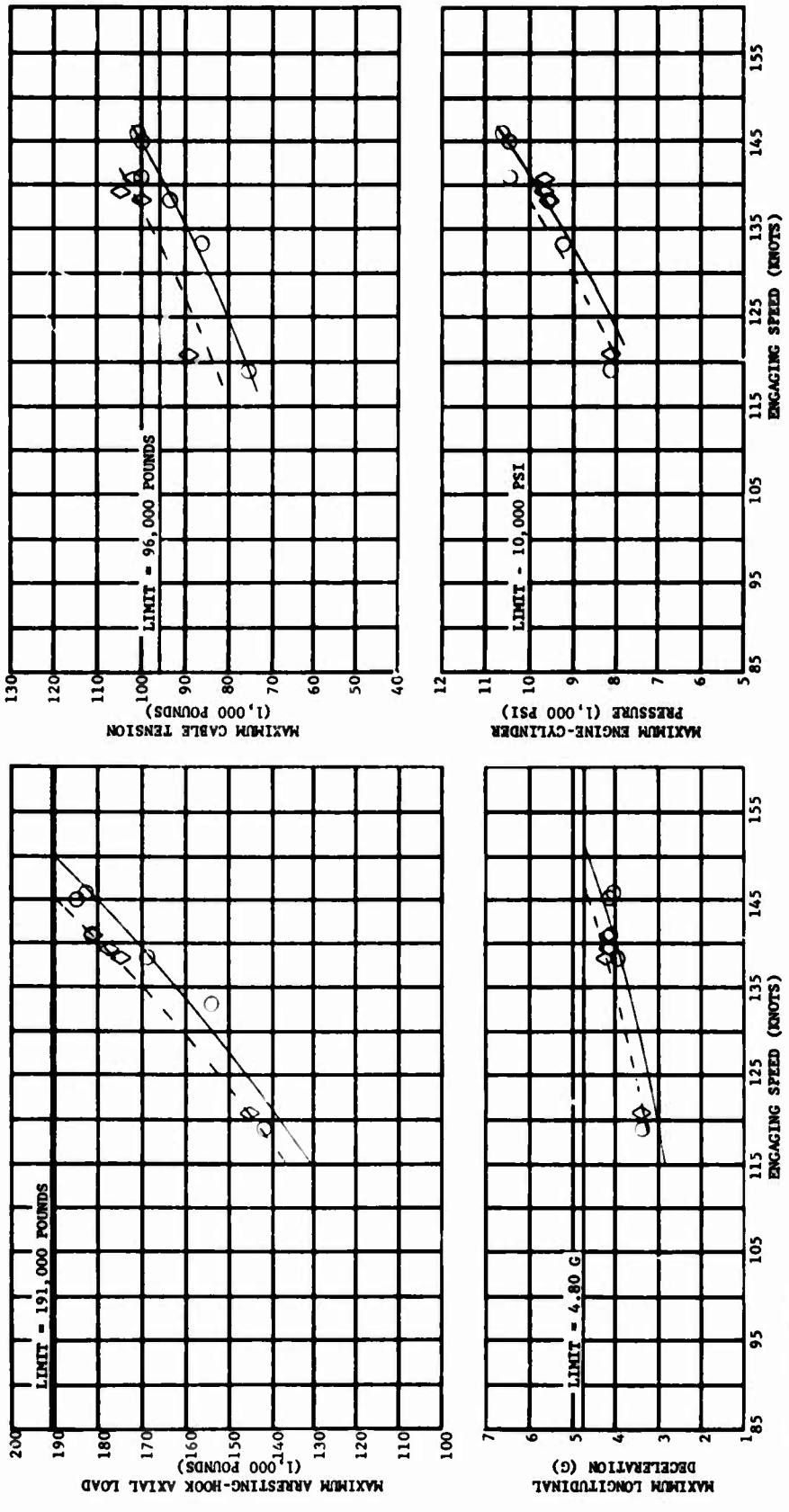


Figure 5 - Composite Graph of 40,000- to 42,000-Pound A-3A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using a Single Weight Setting)

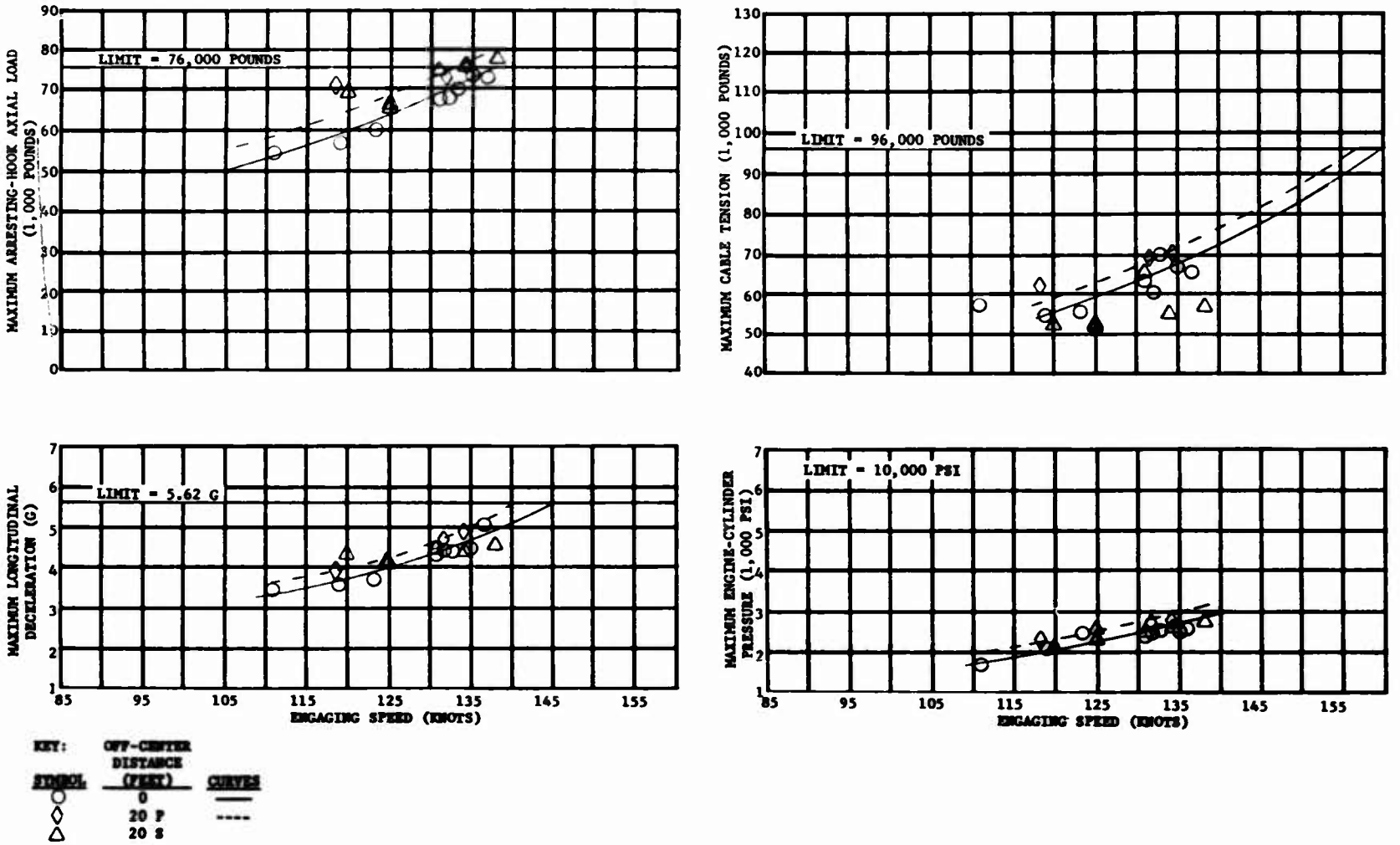


Figure 6 - Composite Graph of 13,500- to 14,500-Pound A-4B Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using an Actual Weight Setting)

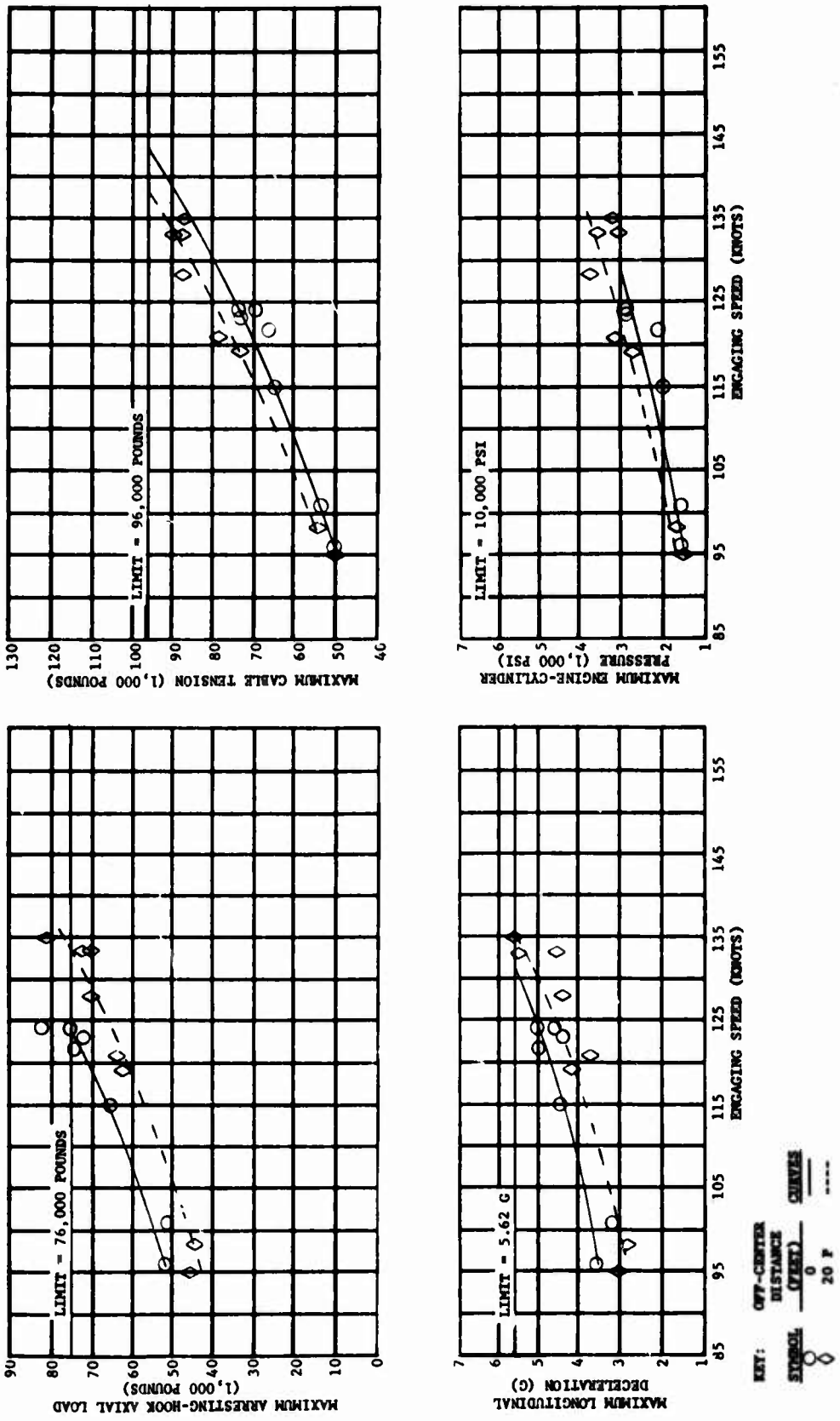


Figure 7 - Composite Graph of 13,500- to 14,500-Pound A-4B Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers, Using an Actual Weight Setting)

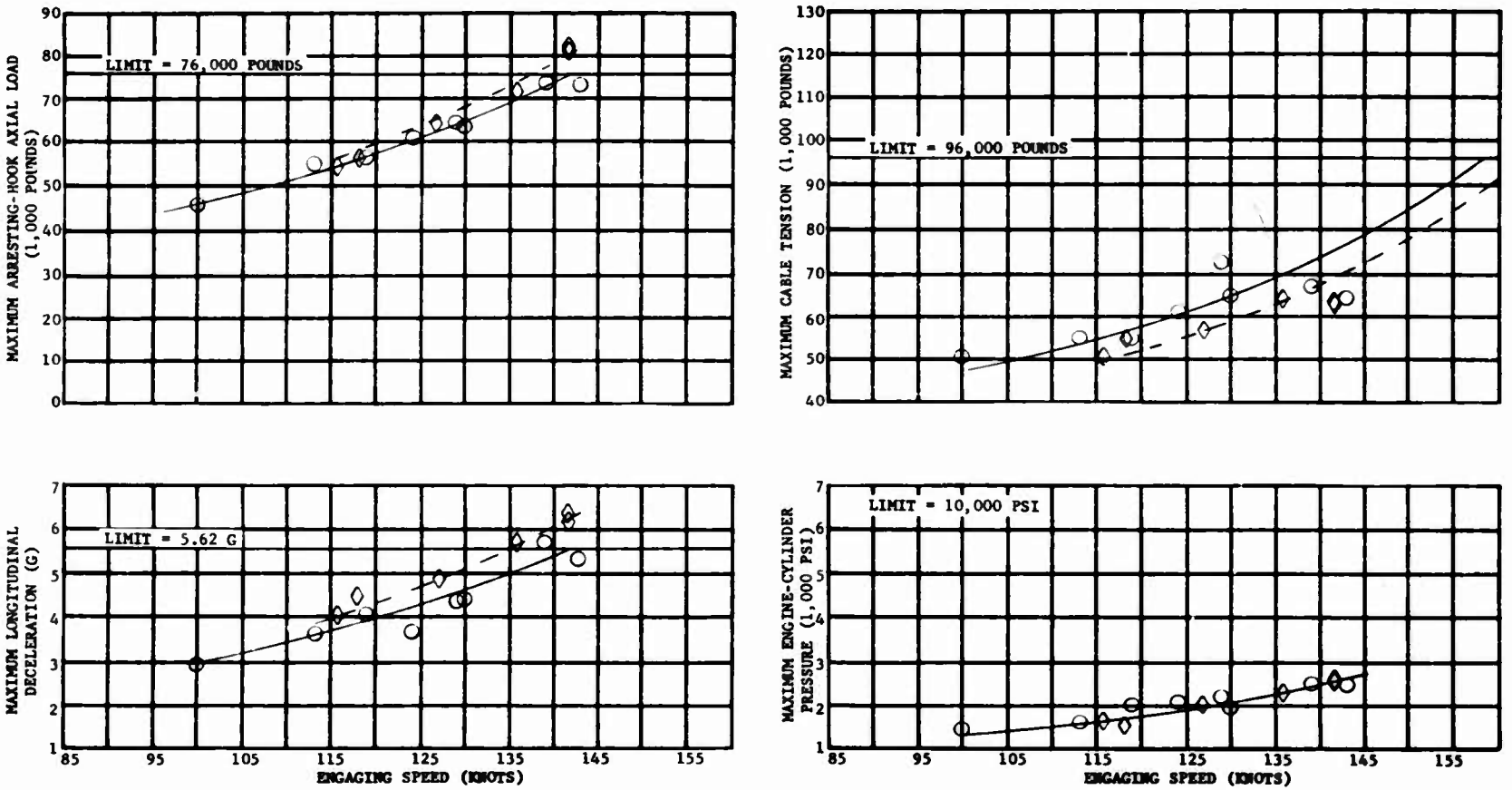


Figure 8 - Composite Graph of 11,500- to 12,500-Pound A-4B Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using an Actual Weight Setting)

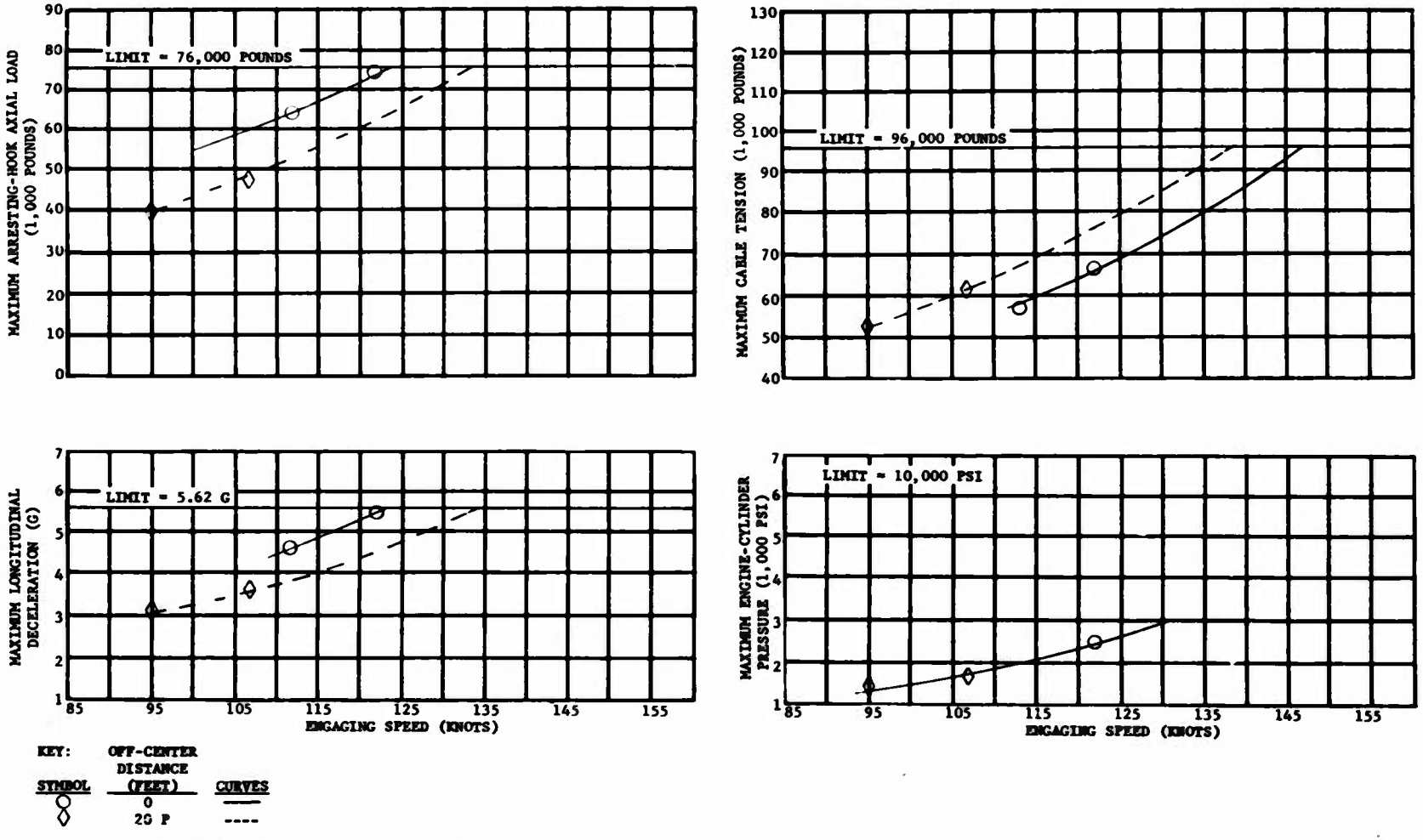


Figure 9 - Composite Graph of 11,500- to 12,500-Pound A-4B Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers, Using an Actual Weight Setting)

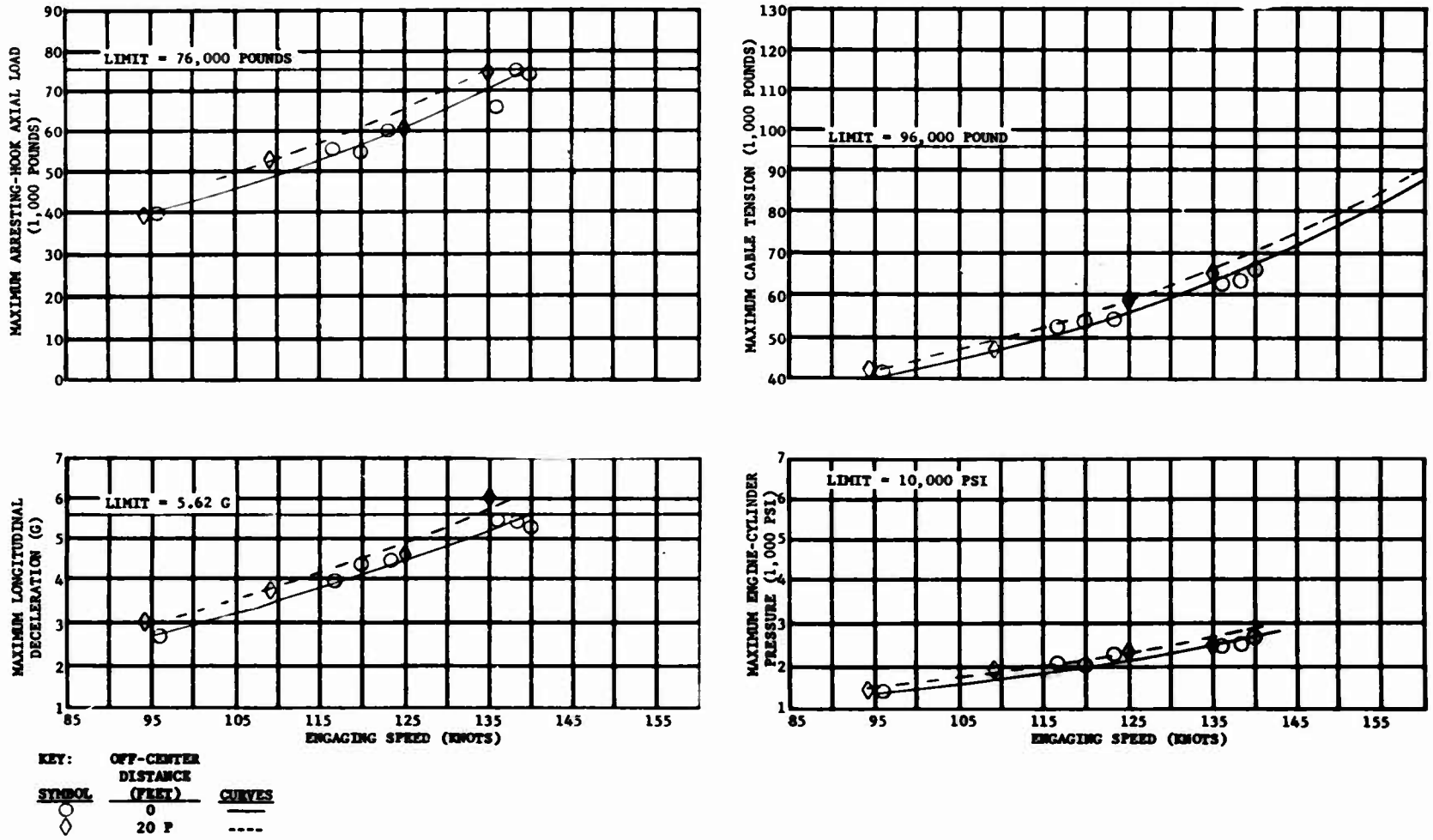


Figure 10 - Composite Graph of 11,500- to 12,500-Pound A-4B Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using a Single Weight Setting)

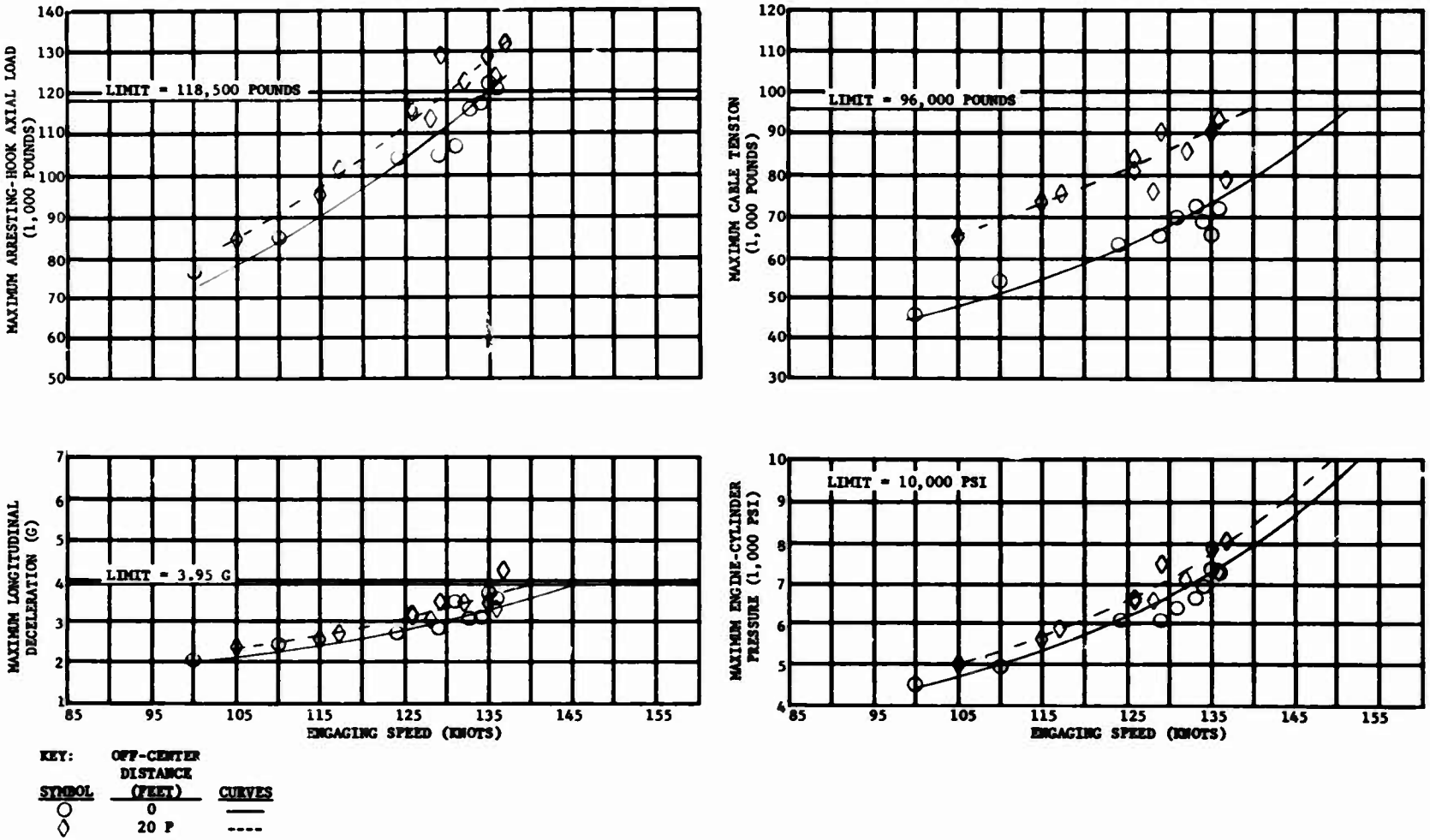


Figure 11 - Composite Graph of 31,000- to 33,000-Pound F-4A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using an Actual Weight Setting)

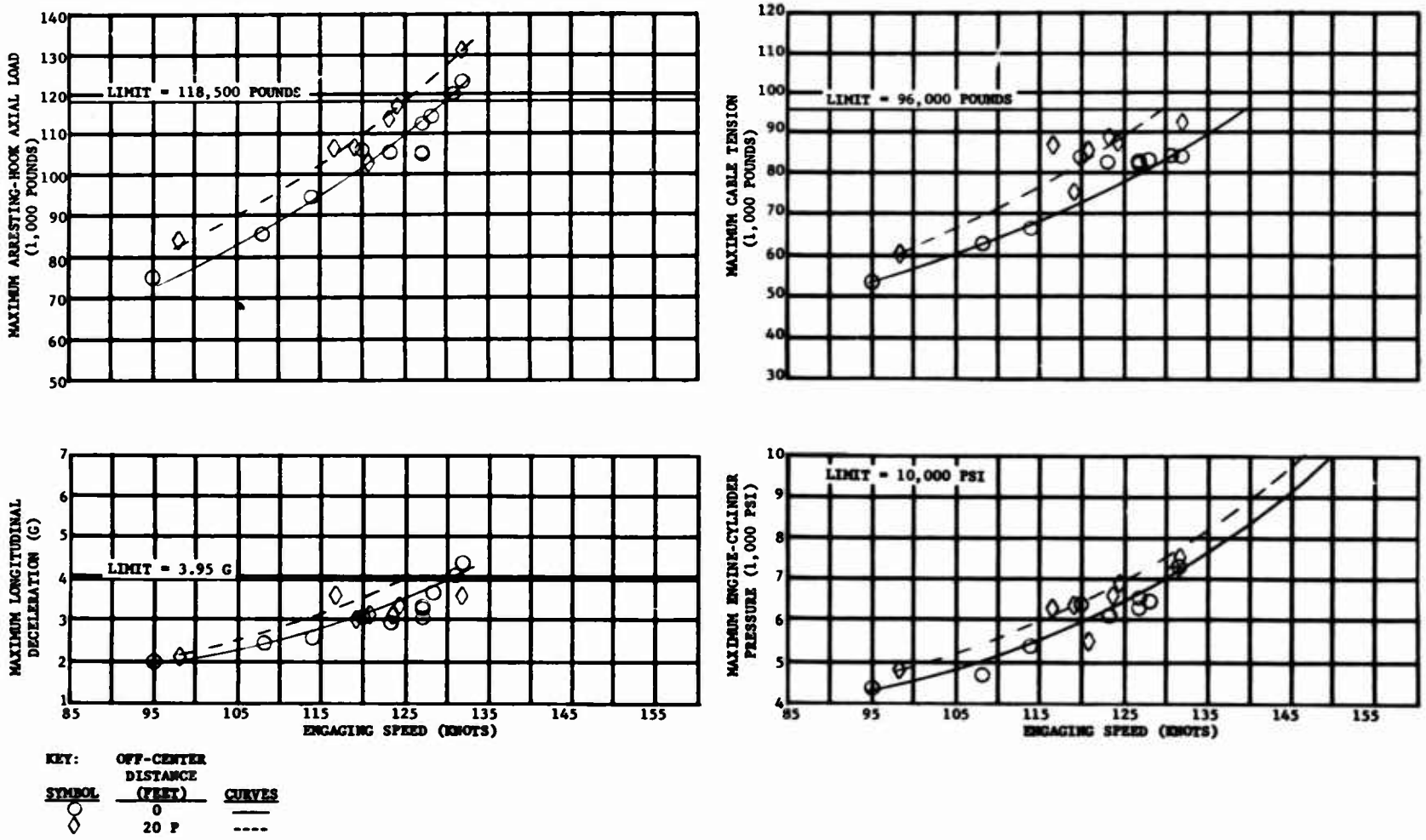


Figure 12 - Composite Graph of 31,000- to 33,000-Pound F-4A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers, Using an Actual Weight Setting)

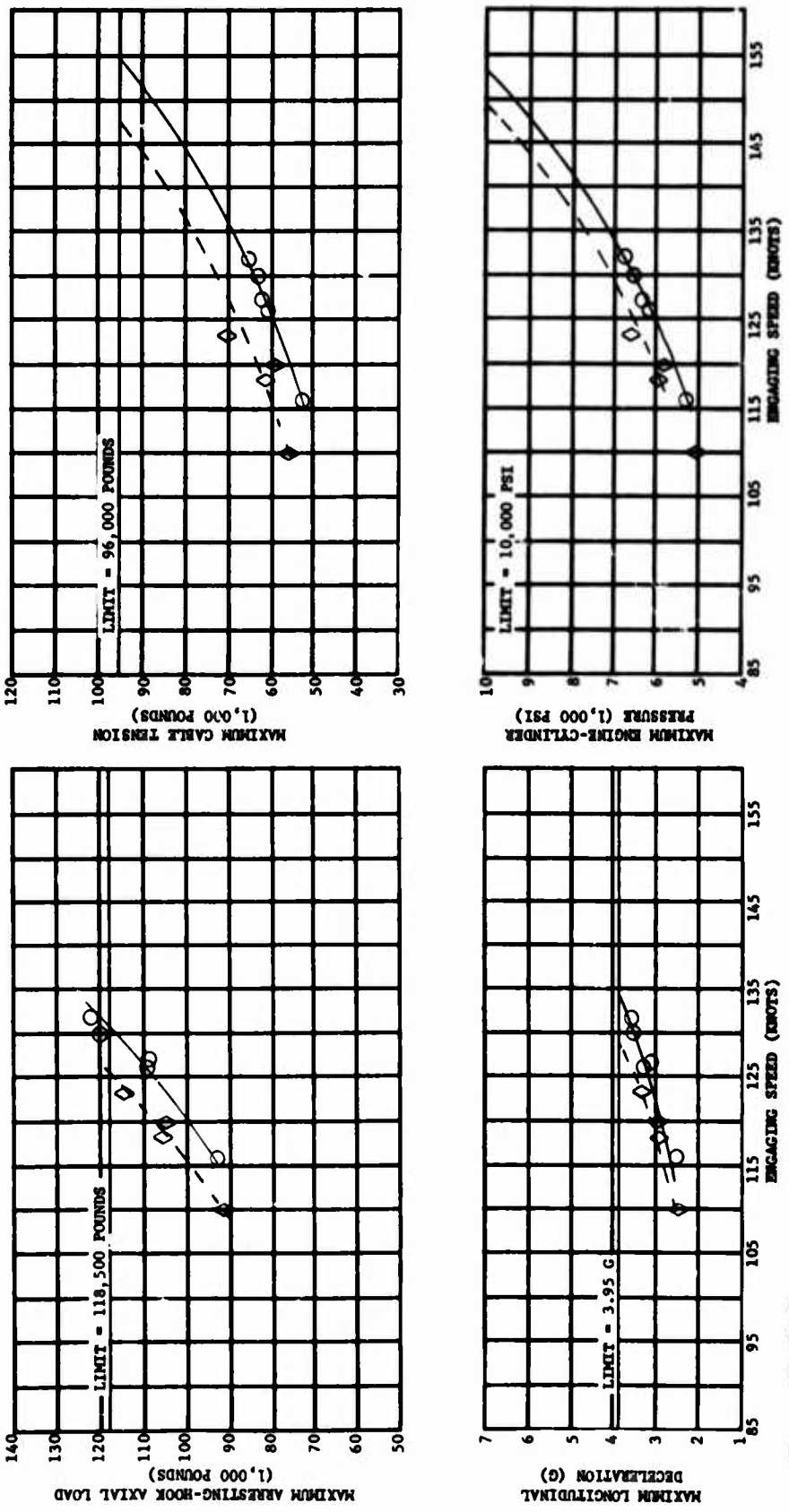


Figure 13 - Composite Graph of 31,000- to 33,700-Pound F-4A Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using a Single Weight Setting)

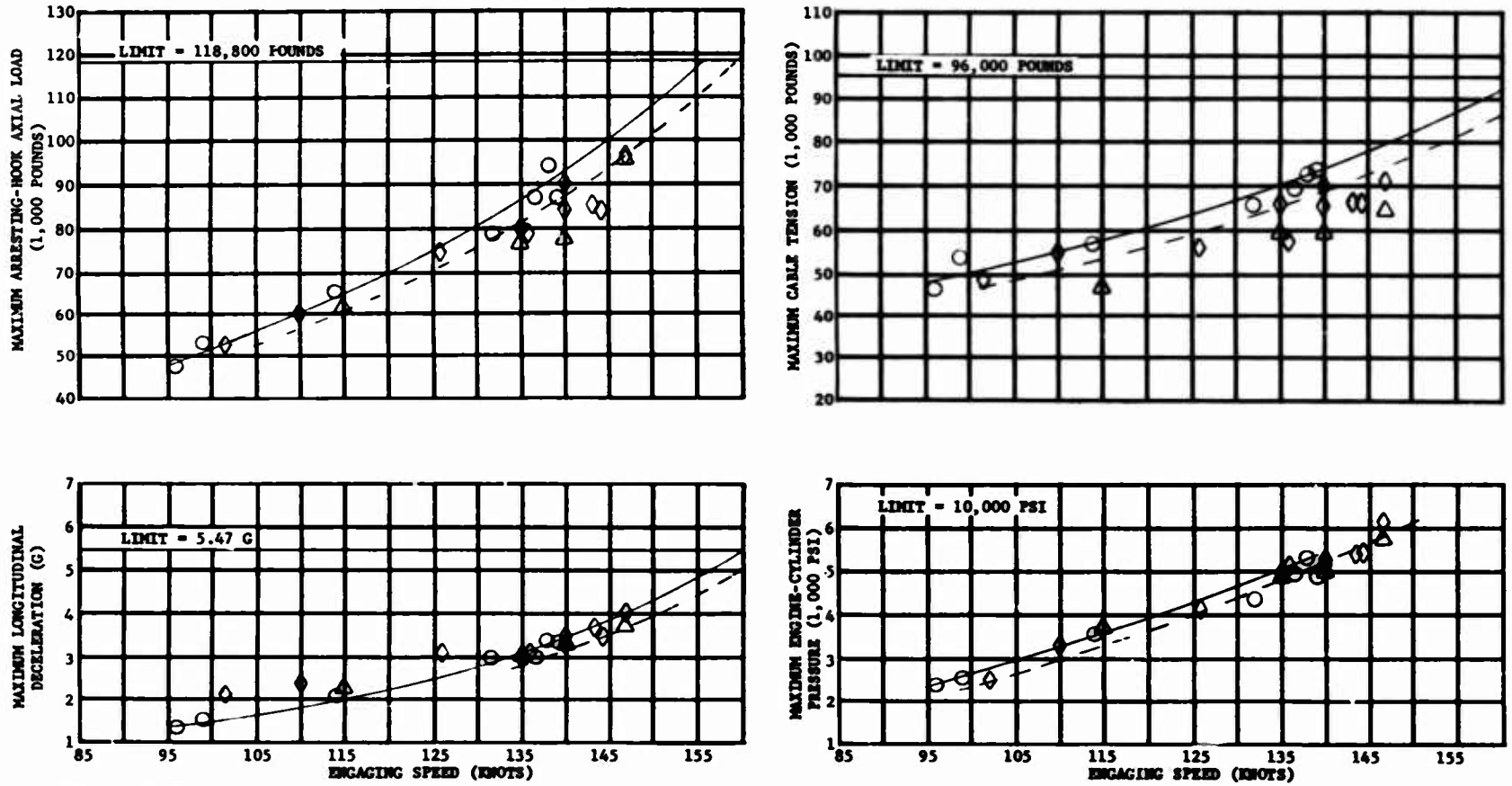


Figure 14 - Composite Graph of 20,000- to 22,000-Pound F-8D Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using an Actual Weight Setting)

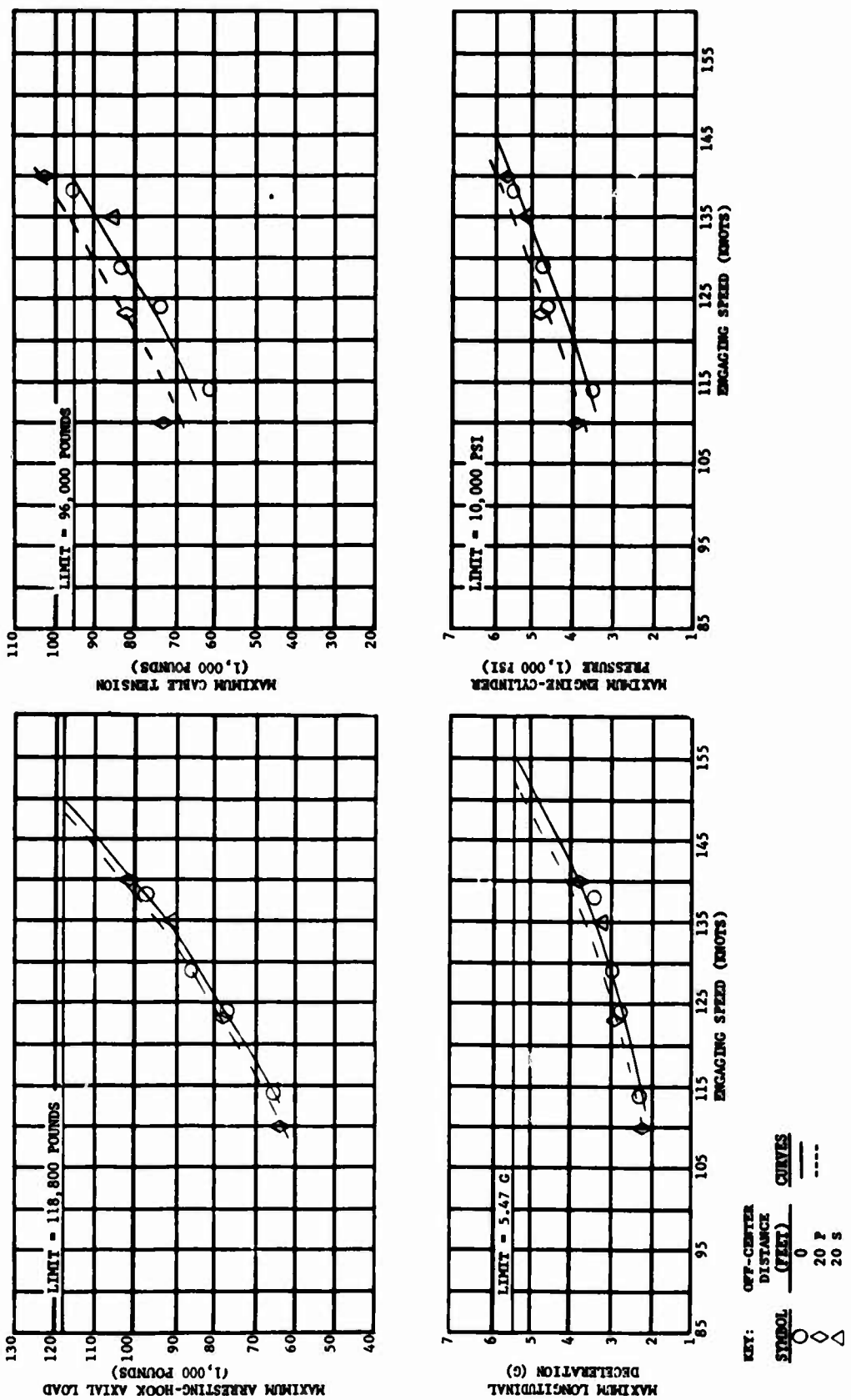


Figure 15 - Composite Graph of 20,000- to 22,000-Pound F-8D Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers, Using an Actual Weight Setting)

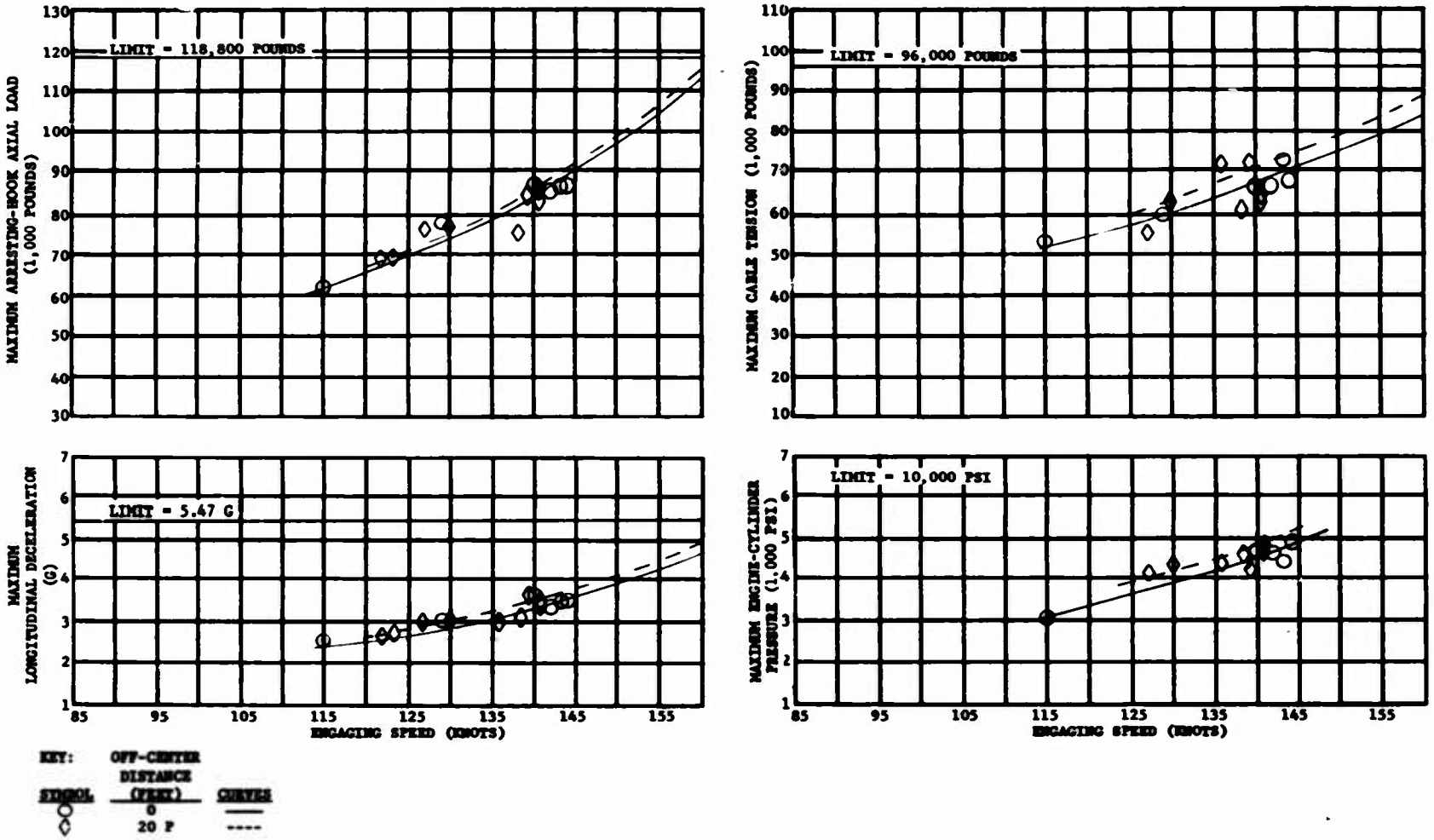
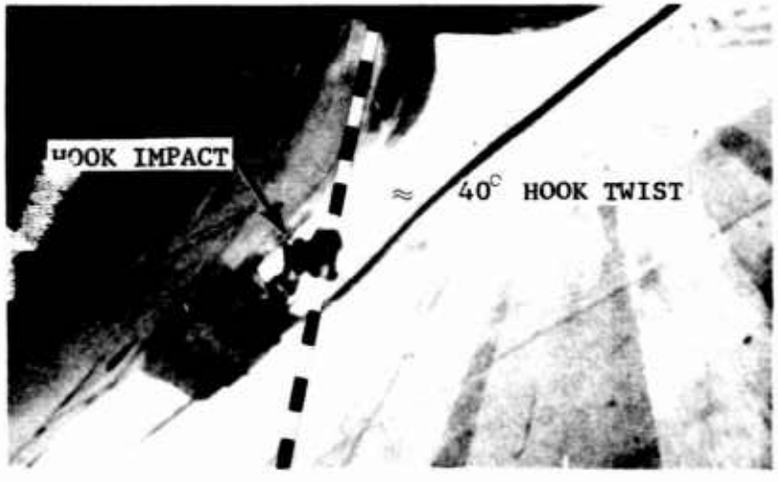


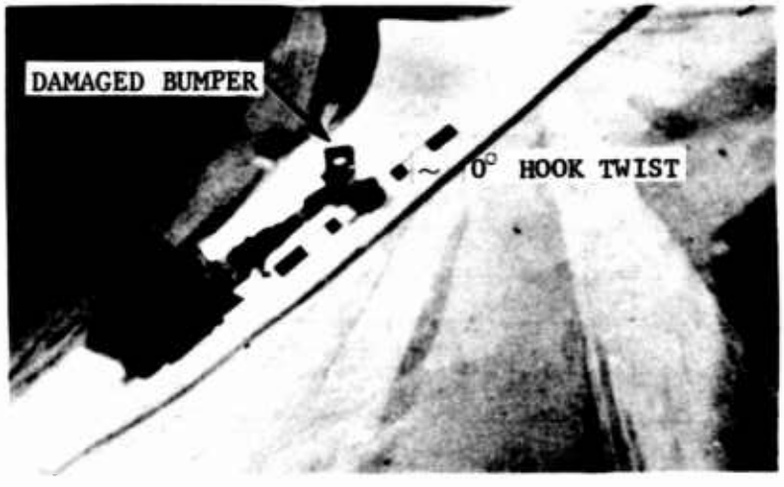
Figure 16 - Composite Graph of 20,000- to 22,000-Pound F-8D Aircraft Tests, Showing Maximum Parameters versus Engaging Speed (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using a Single Weight Setting)

A. TIME = 0.078 SECOND

B. TIME = 0.083 SECOND

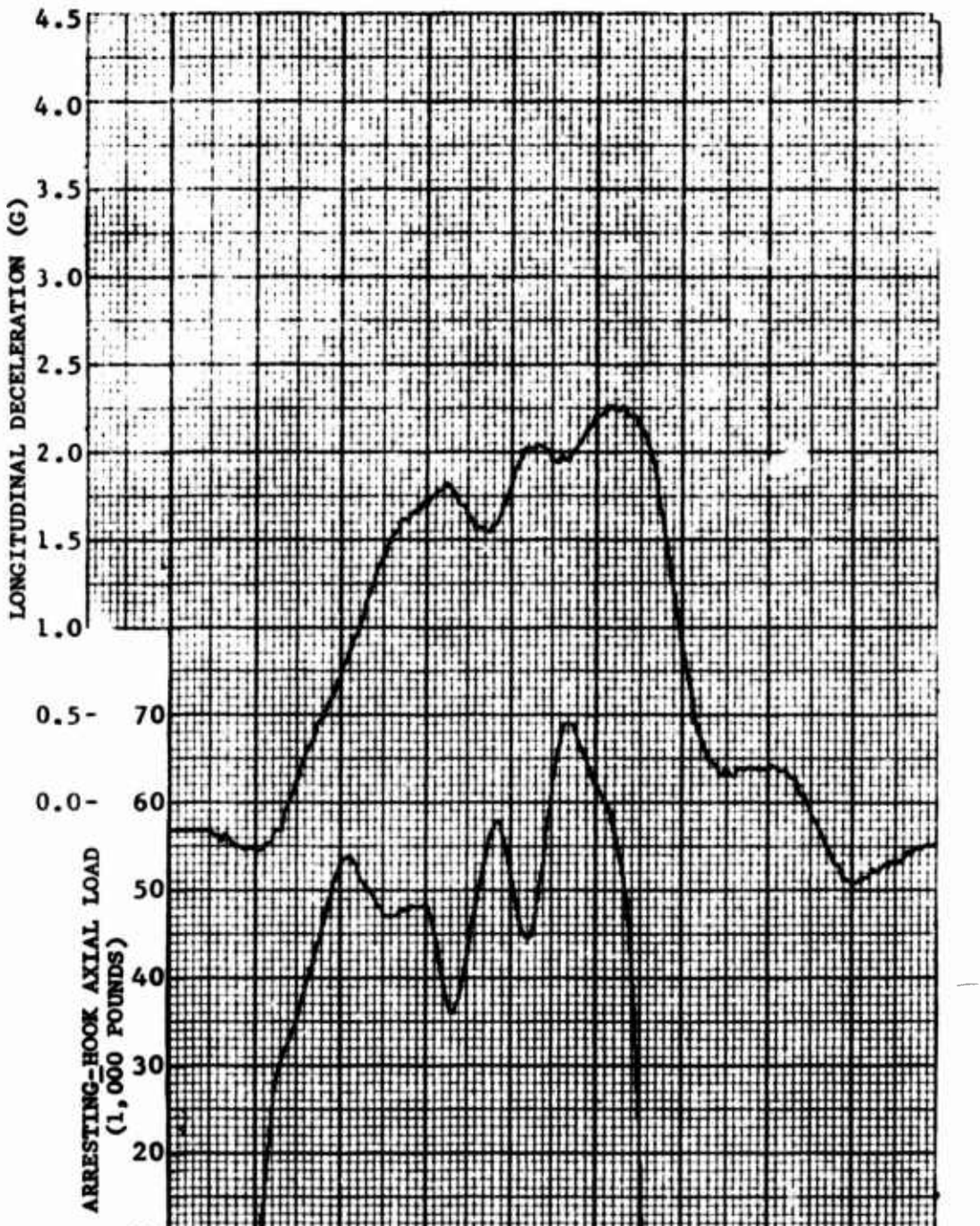


C. TIME = 0.088 SECOND



D. TIME = 0.109 SECOND

Figure 17 - Views of F-8D Aircraft Arresting Hook Disengaging From the Crossdeck Pendant and Damaged Bumper Pad; Event 23109, 20-Foot OFF-CENTER (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers)



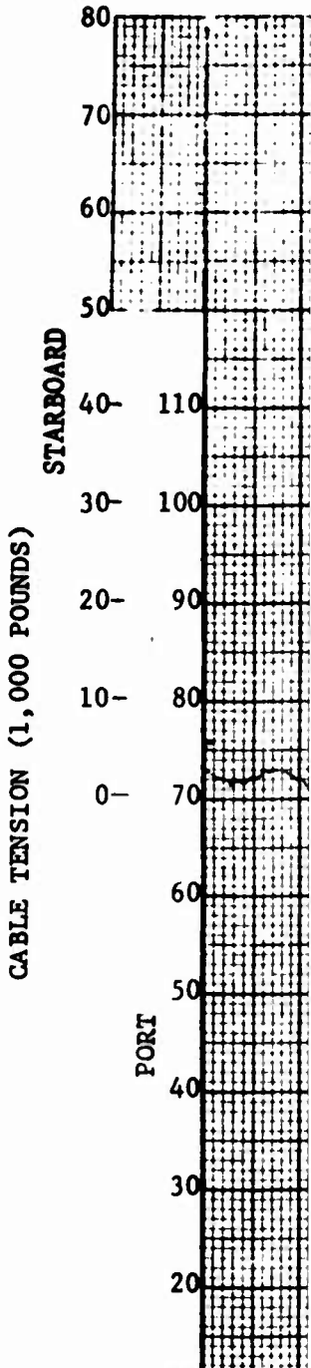
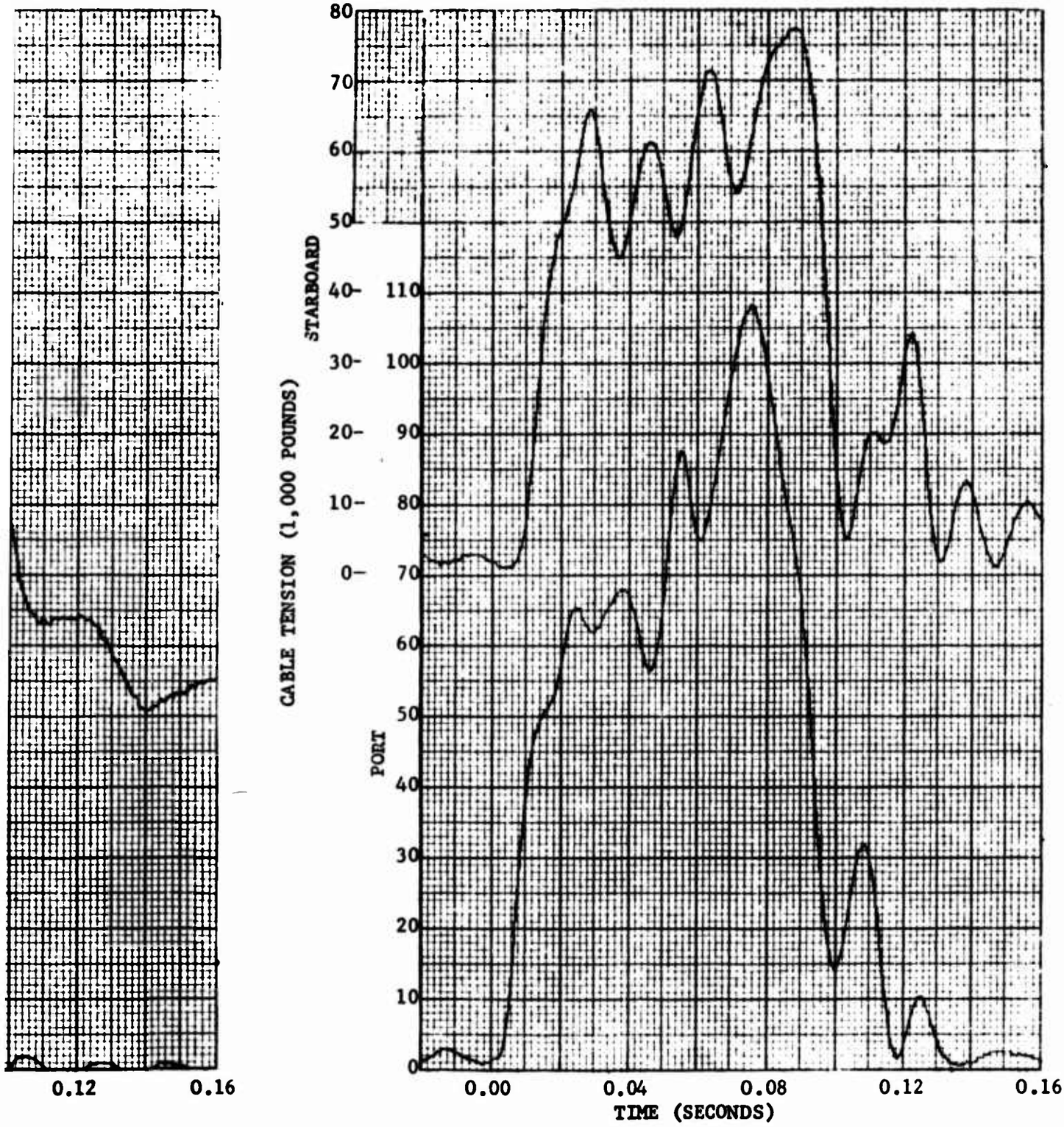


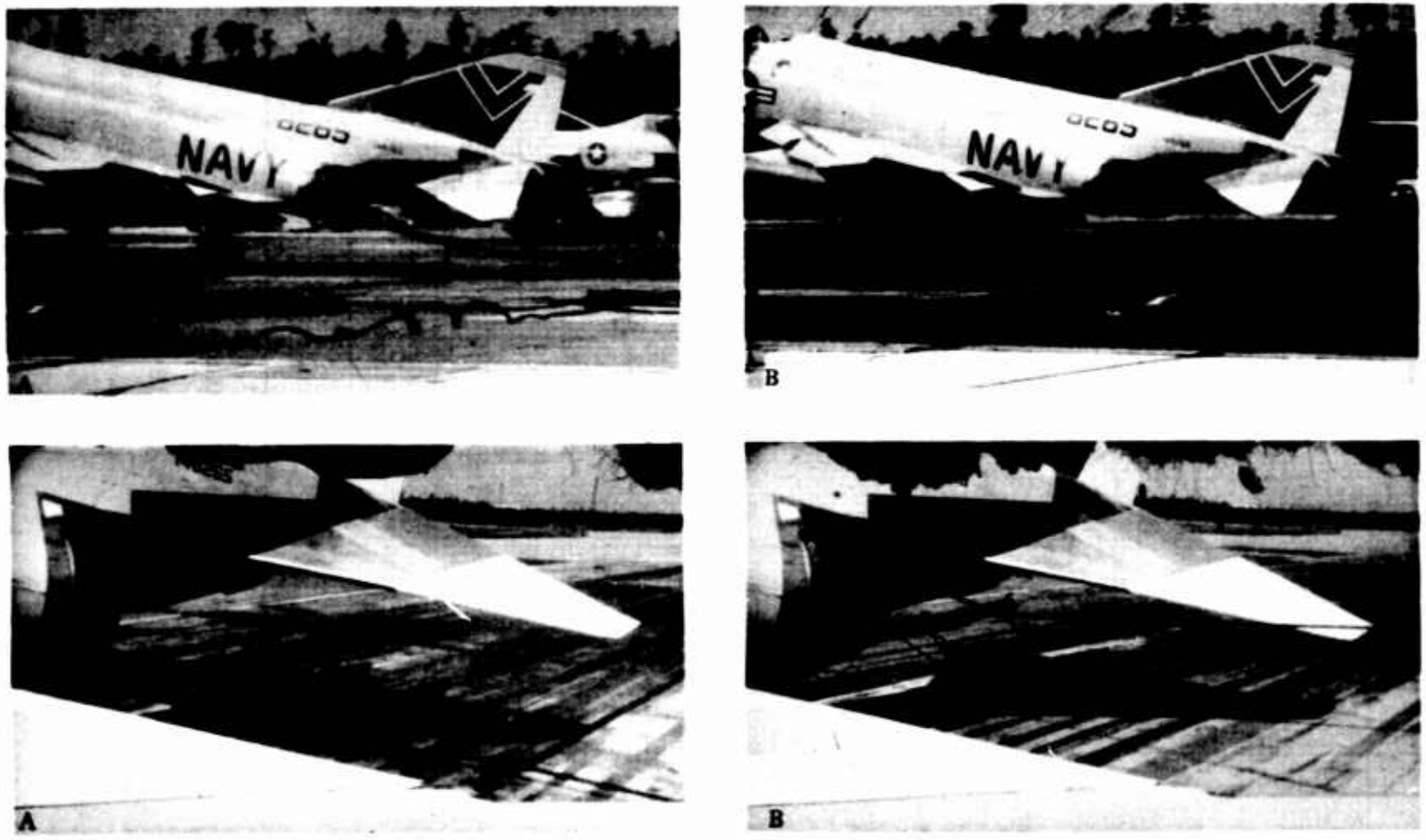
Figure 18 - Sample Time History Showing the Oscillation in A
Longitudinal-Deceleration, and Cable-Tension
the F-8 Aircraft Arresting Hook Twists and
(Mark 7 Mod 3 Arresting Gear Configured With

A



e Time History Showing the Oscillation in Arresting-Hook-Axial Load, ngitudinal-Deceleration, and Cable-Tension Data that Occurs When the F-8 Aircraft Arresting Hook Twists and Sheds the Pendant Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers)

B



A = WIRE PICKUP

B = 0.115 SECOND AFTER WIRE PICKUP

Figure 19 - Views of F-4A Aircraft Attitude with Stabilator/Crossdeck Pendant Contact, Event 24115, Arresting-Hook Touchdown 10 Feet Before Deck Pendant (Mark 7 Mod 3 Arresting Gear Configured with Sheave Dampers)

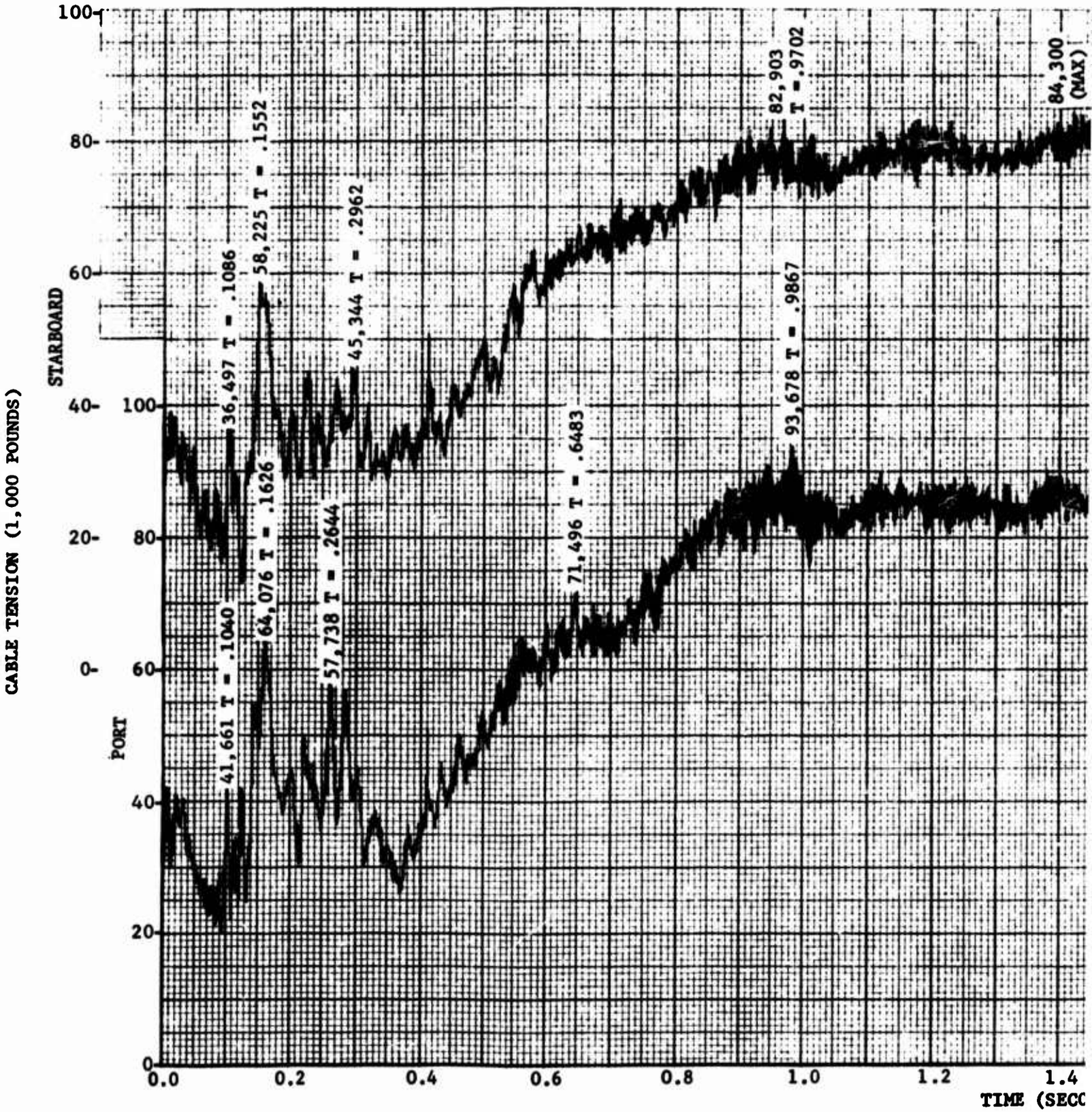
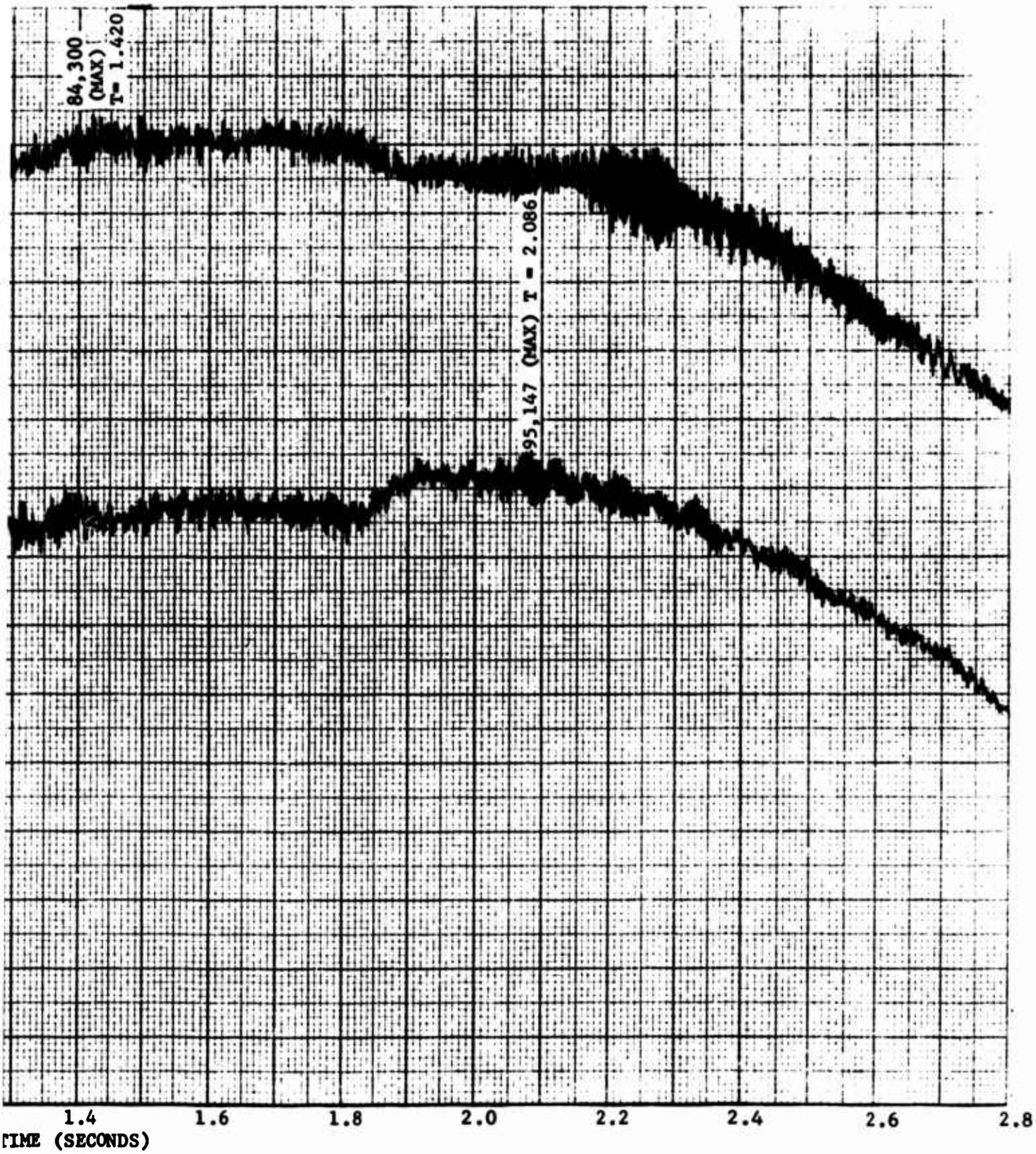


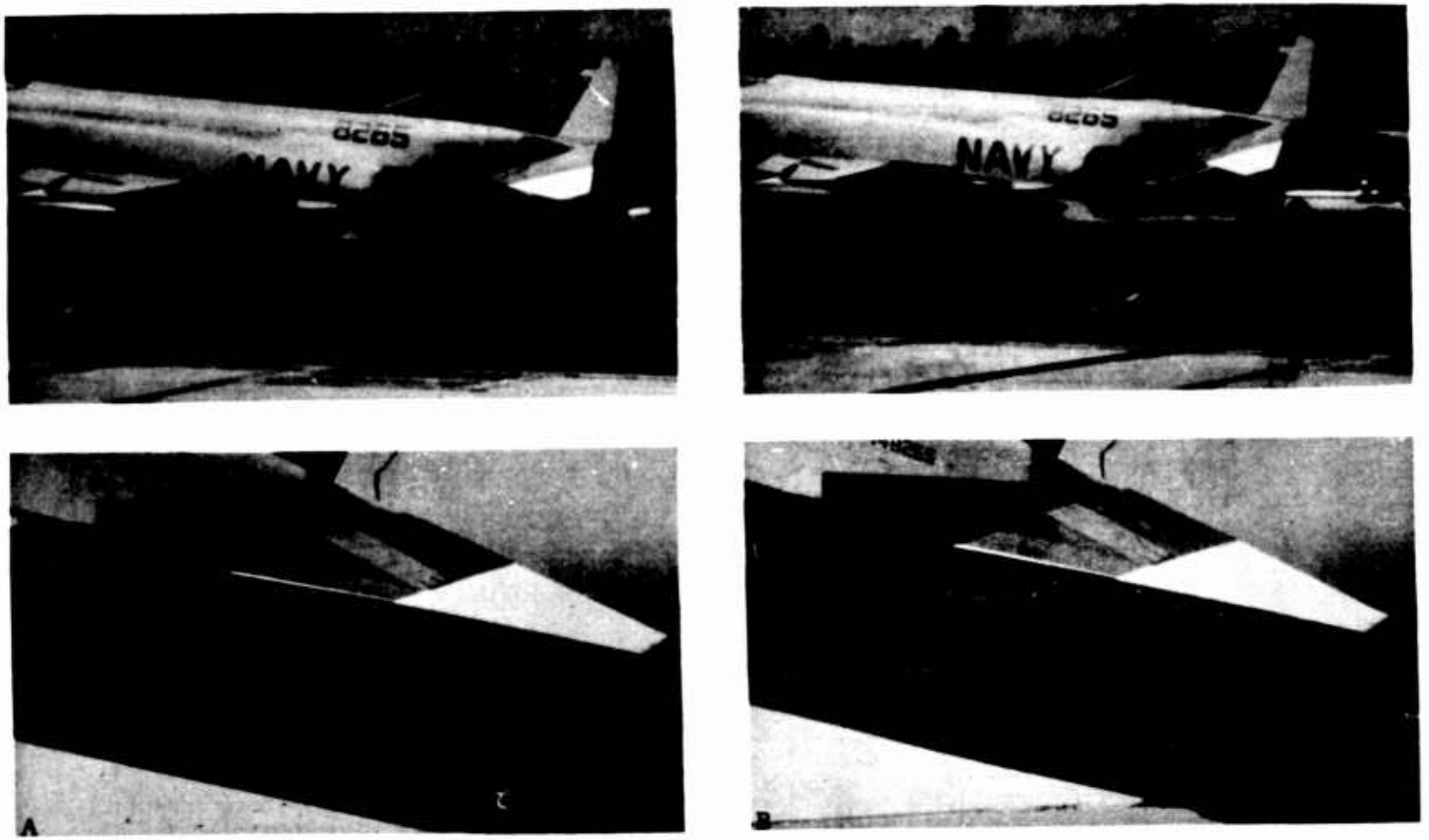
Figure 21 - Frequency Response Characteristics of Port and Starboard Cable Ten
ON-CENTER Arrestment of a 49,200-Pound A-3 Air
(Mark 7 Mod 3 Arresting Gear Configured With Shea

A



Cable Tensions Recorded at a Frequency of 330 Hz During Event 21650,
ıd A-3 Aircraft at an Engaging Speed of 124 Knots
With Sheave Dampers, Using an Actual Weight Setting)

B



A = WIRE PICKUP

B = 0.115 SECOND AFTER WIRE PICKUP

Figure 20 - Views of F-4A Aircraft Attitude without Stabilator/Crossdeck Pendant Contact, Event 24133, Arresting-Hook Touchdown 60 Feet Before Deck Pendant (Mark 7 Mod 3 Arresting Gear Configured with Sheave Dampers)

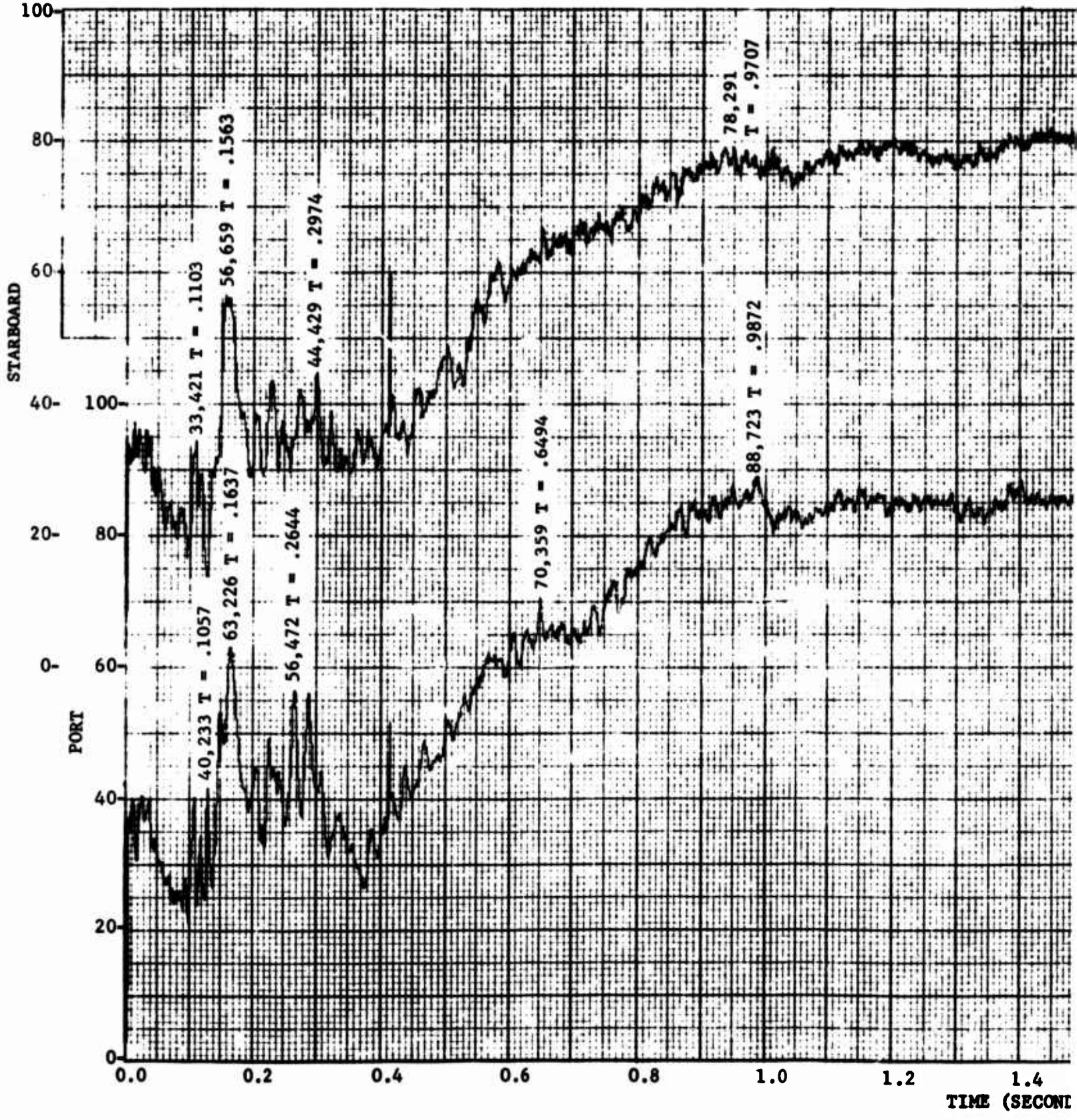
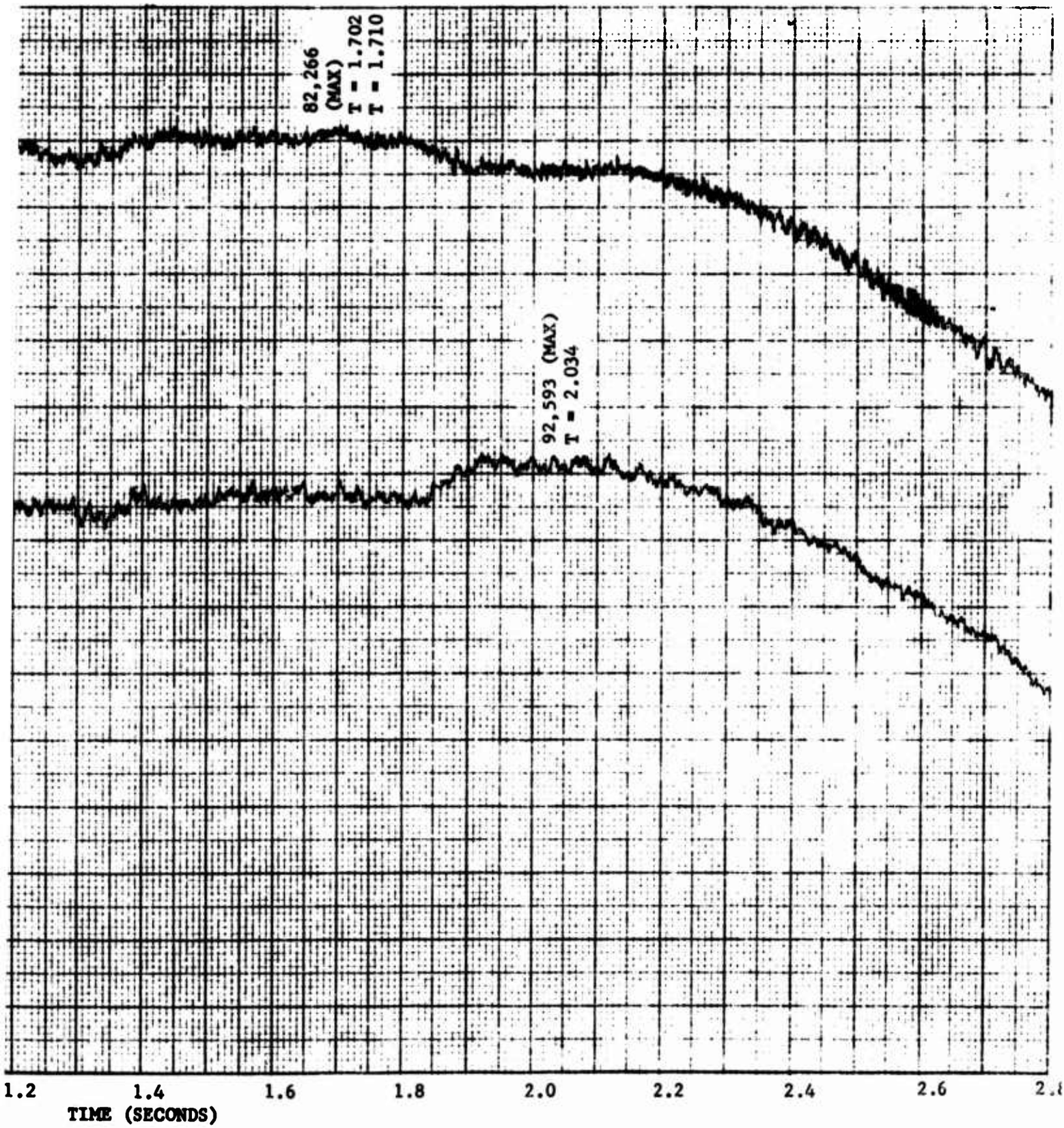


Figure 22 - Frequency Response Characteristics of Port and Starboard Cable Tensi
ON-CENTER Arrestment of a 49,200-Pound A-3 Aircr
(Mark 7 Mod 3 Arresting Gear Configured With Sheave



rboard Cable Tensions Filtered to a Frequency of 160 Hz During Event 23650
00-Pound A-3 Aircraft at an Engaging Speed of 124 Knots
igured With Sheave Dampers, Using an Actual Weight Setting)

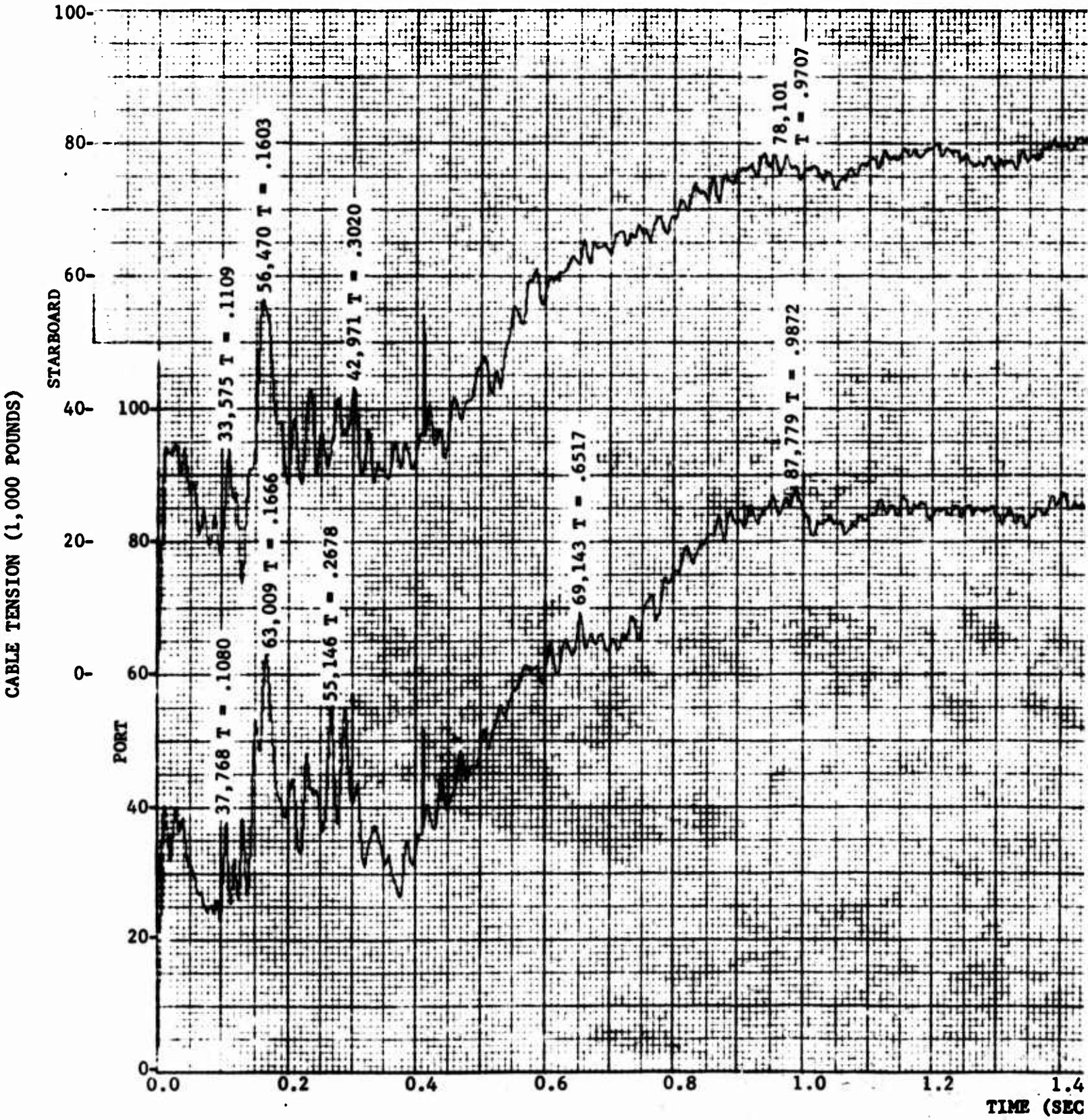
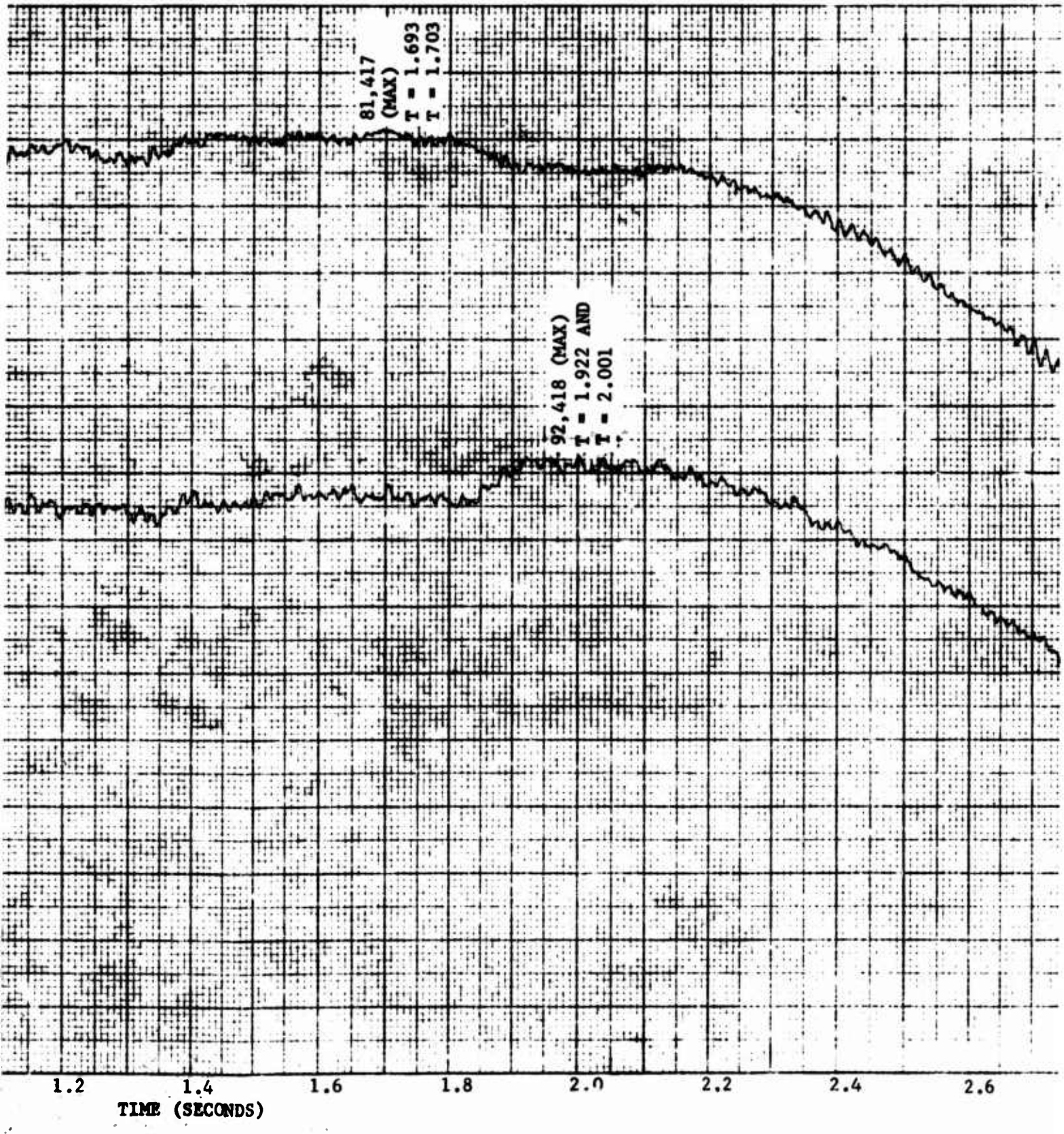


Figure 23 - Frequency Response Characteristics of Port and Starboard Cable Te
ON-CENTER Arrestment of a 49,200-Pound A-3 Ai
(Mark 7 Mod 3 Arresting Gear Configured With She



) Starboard Cable Tensions Filtered to a Frequency of 60 Hz During Event 21650,
49,200-Pound A-3 Aircraft at an Engaging Speed of 124 Knots
Configured With Sheave Dampers, Using an Actual Weight Setting)

B

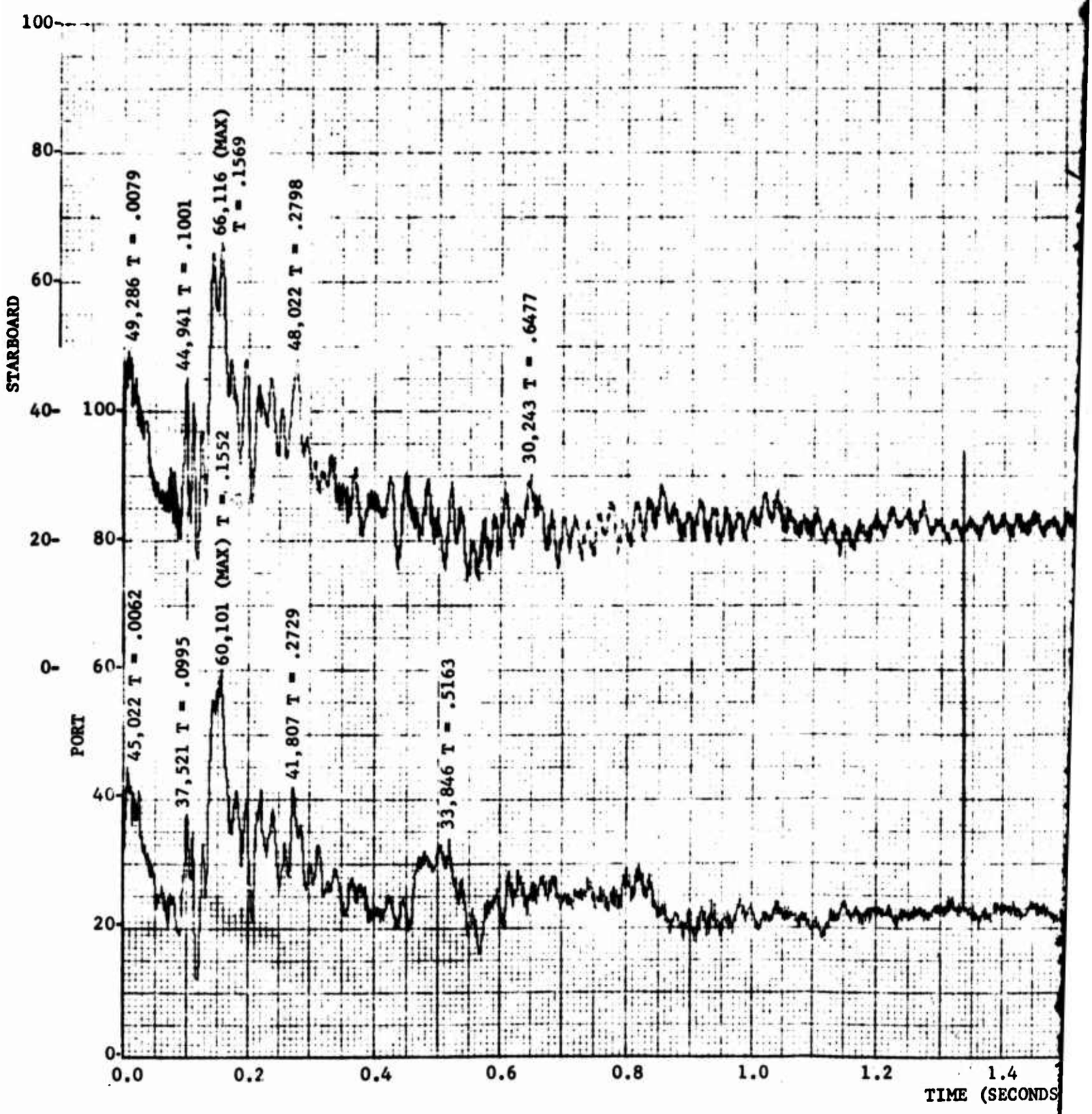
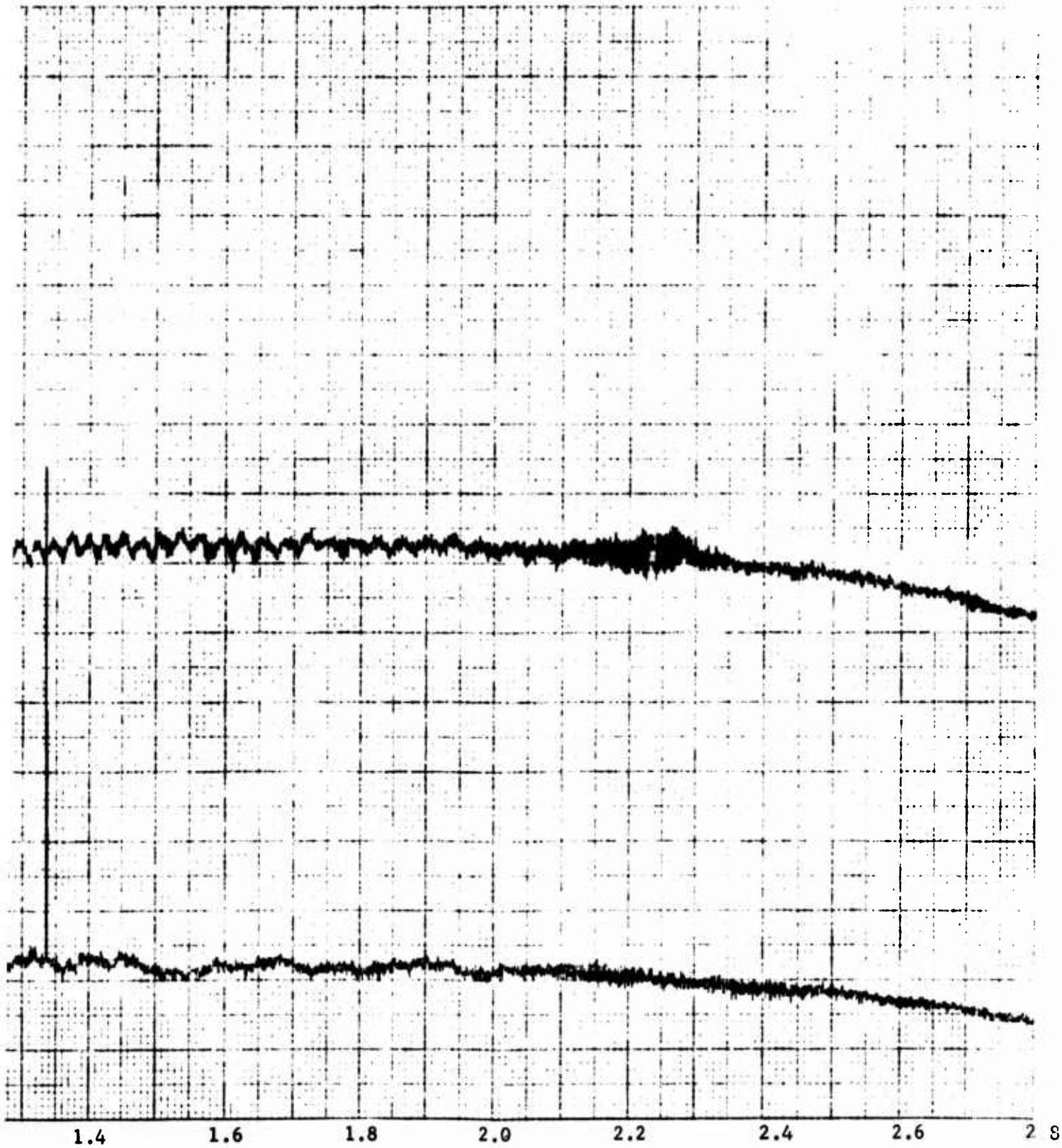


Figure 24 - Frequency Response Characteristics of Port and Starboard Cable Tensio
ON-CENTER Arrestment of a 13,500-Pound A-4 Aircra
(Mark 7 Mod 3 Arresting Gear Configured With Sheave



l Cable Tensions Recorded at a Frequency of 330 Hz During Event 21961,
ınd A-4 Aircraft at an Engaging Speed of 137 Knots
l With Sheave Dampers, Using an Actual Weight Setting)

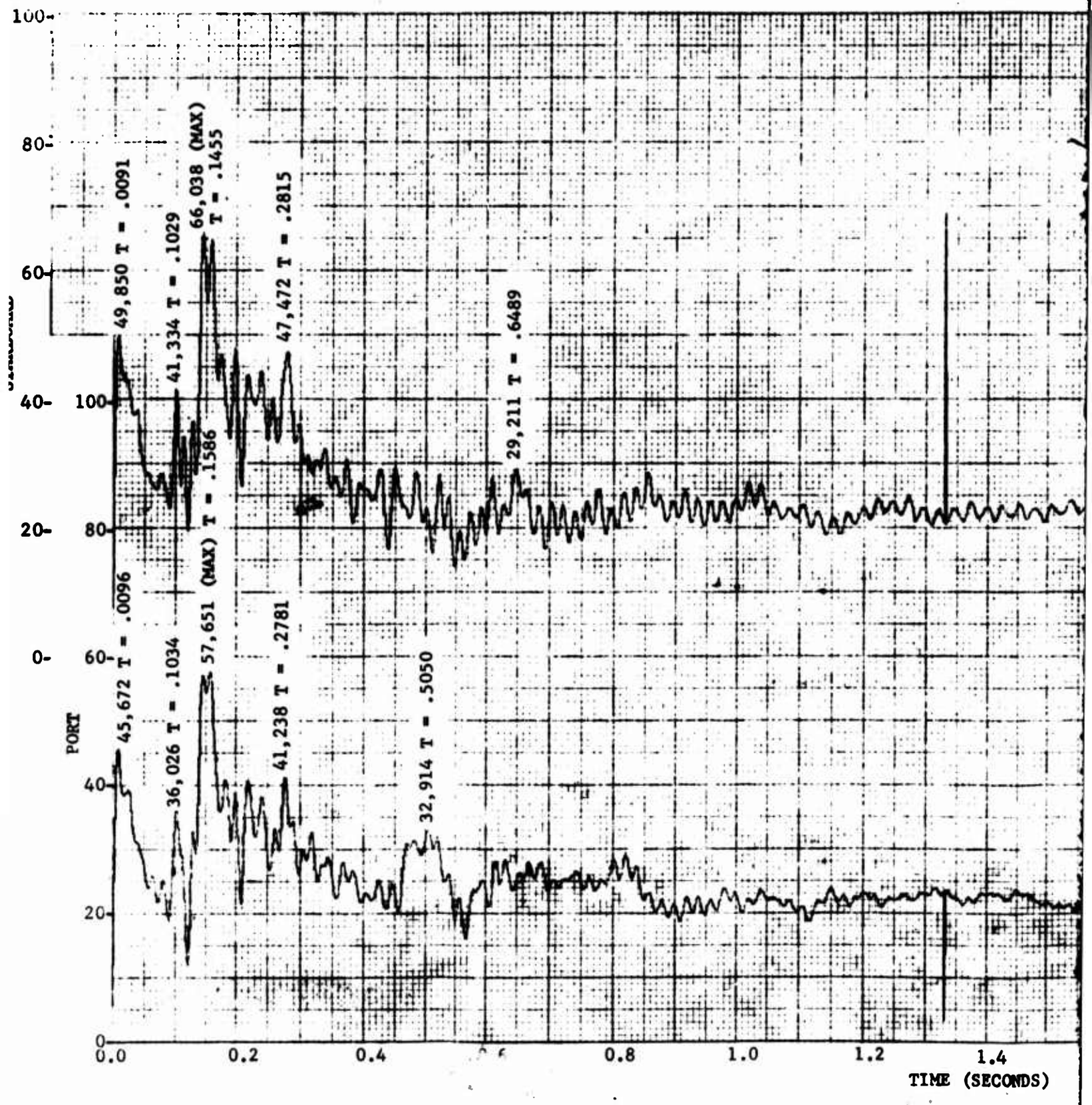
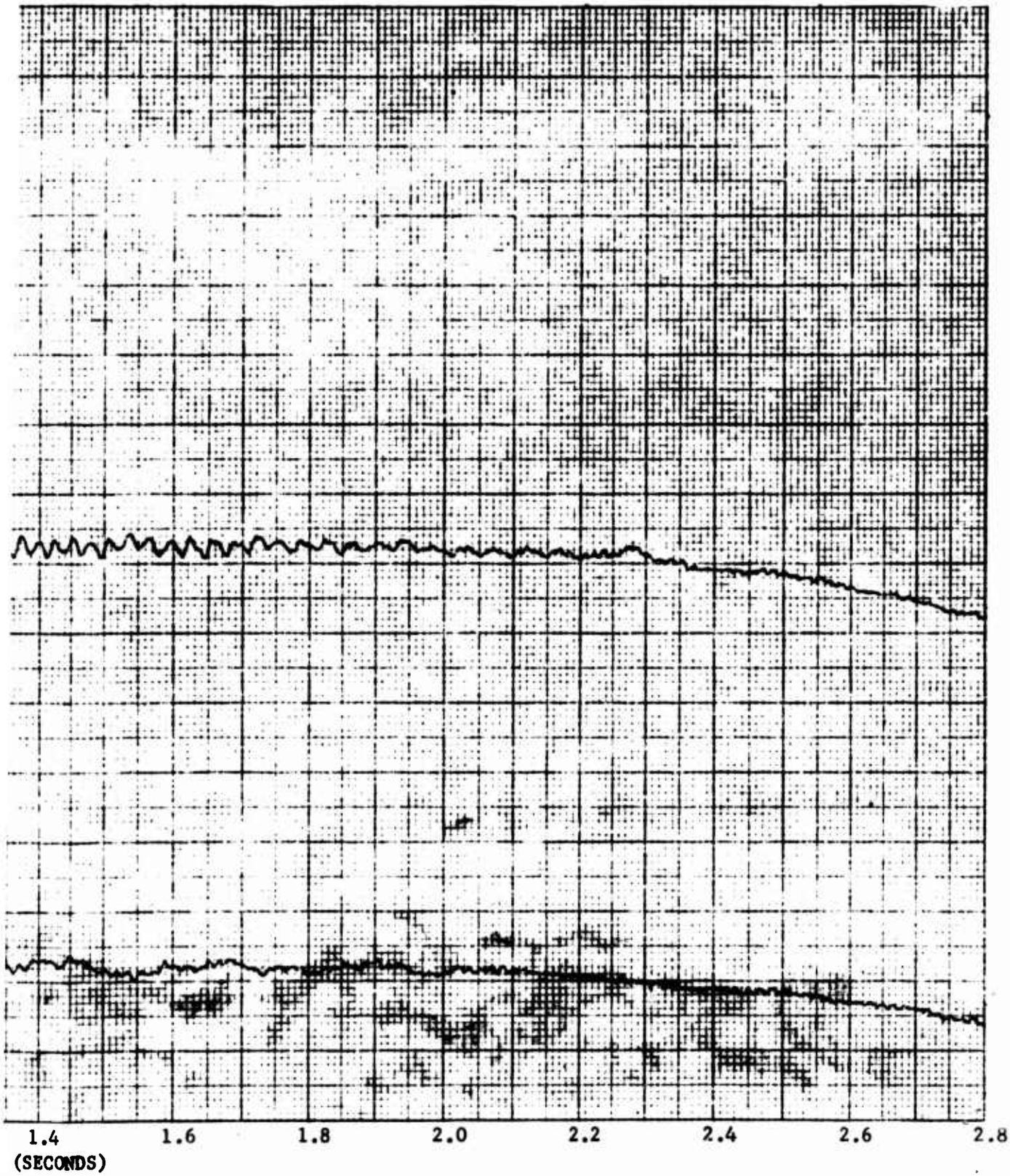


Figure 25 - Frequency Response Characteristics of Port and Starboard Cable Tensions
ON-CENTER Arrestment of a 13,500-Pound A-4 Aircraft
(Mark 7 Mod 3 Arresting Gear Configured With Sheave Dar



)..e Tensions Filtered to a Frequency of 60 Hz During Event 21961,
-4 Aircraft at an Engaging Speed of 137 Knots
th Sheave Dampers, Using an Actual Weight Setting)

B

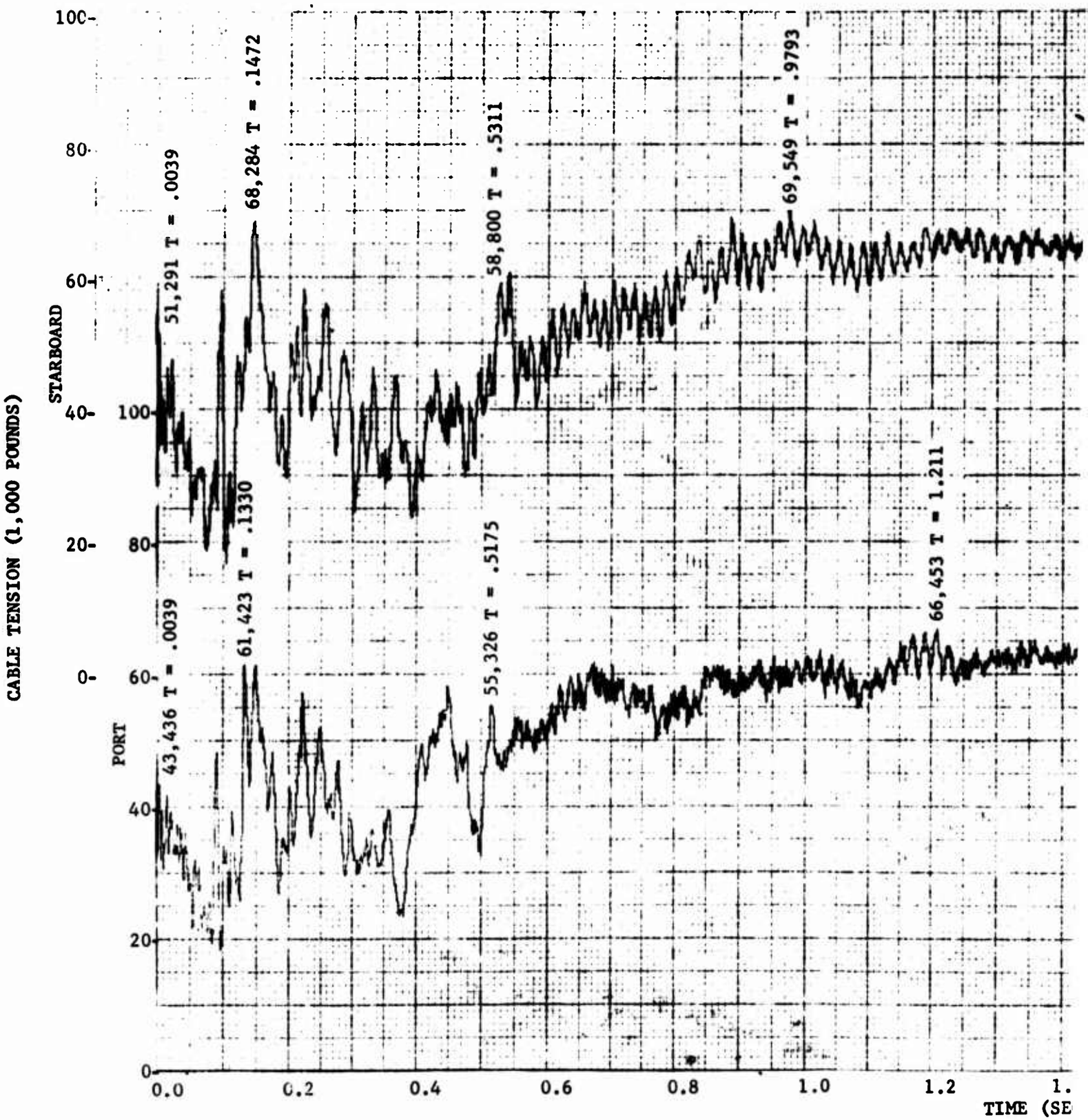
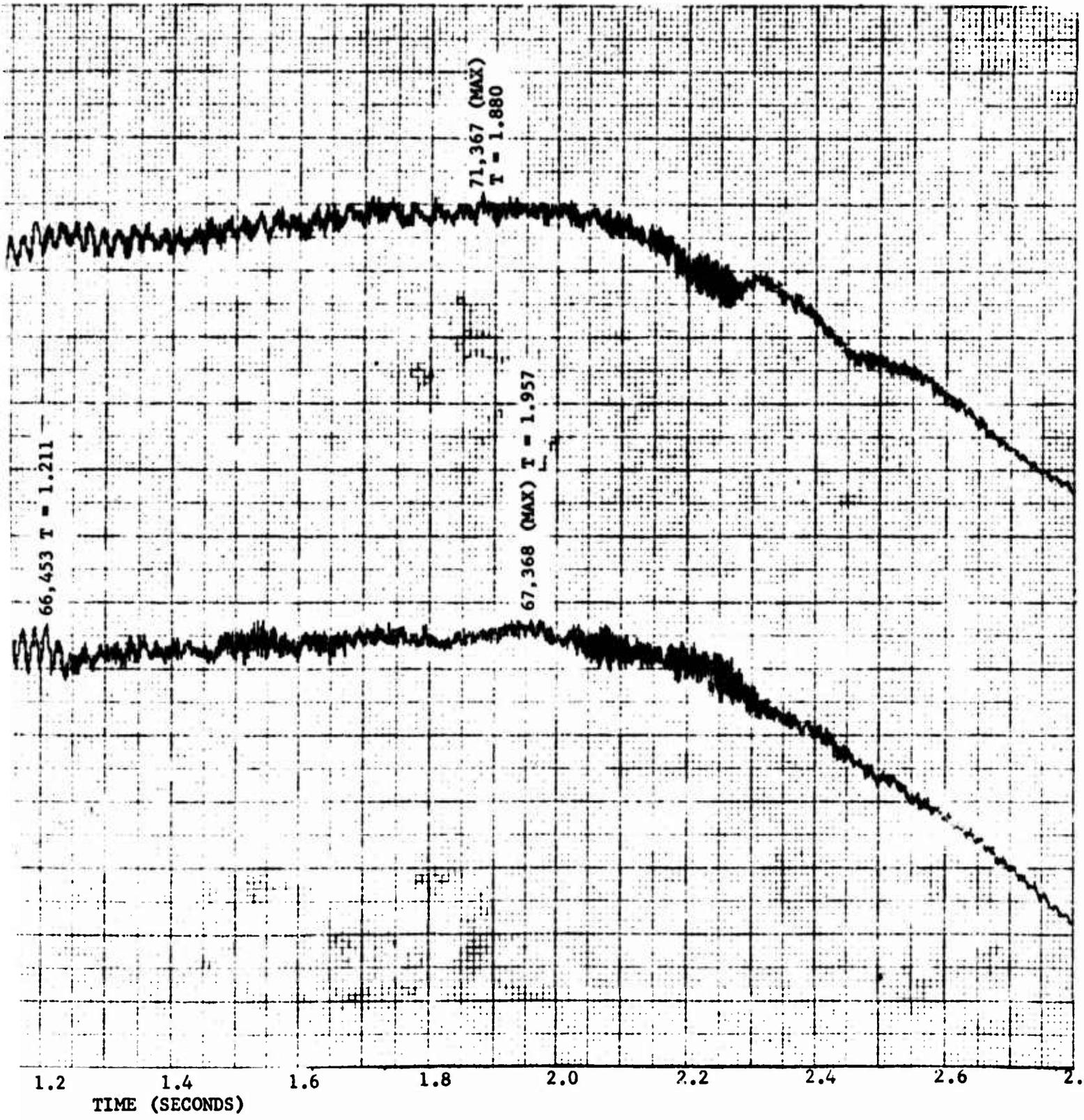


Figure 26 - Frequency Response Characteristics of Port and Starboard Cable
ON-CENTER Arrestment of a 32,300-Pound F-4
(Mark 7 Mod 3 Arresting Gear Configured With S



tarboard Cable Tensions Recorded at a Frequency of 330 Hz During Event 21874,
,300-Pound F-4 Aircraft at an Engaging Speed of 136 Knots
nfigured With Sheave Dampers, Using an Actual Weight Setting)

B

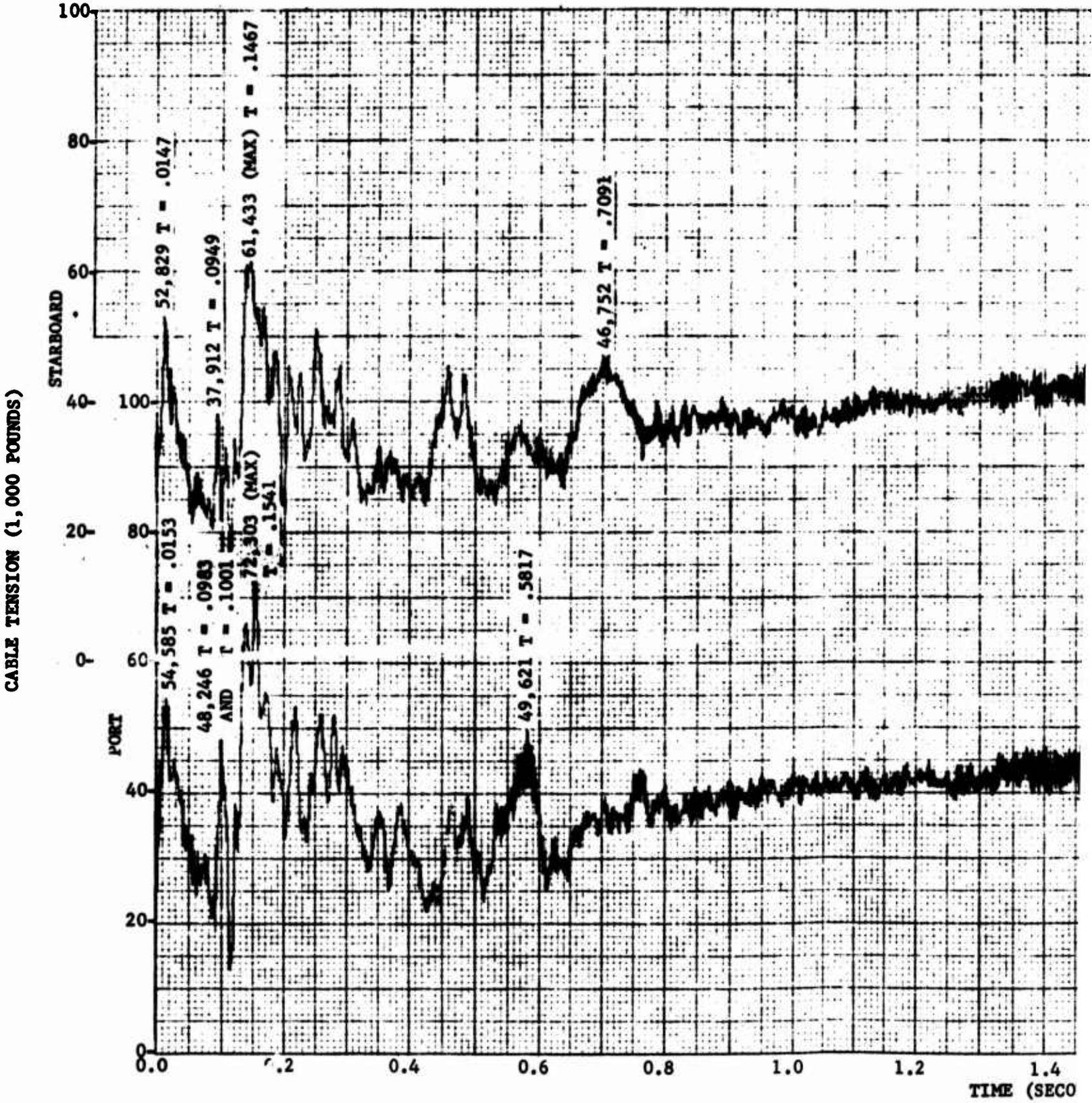


Figure 28 - Frequency Response Characteristics of Port and Starboard Cable Tens
ON-CENTER Arrestment of a 21,400-Pound F-8 Airc
(Mark 7 Mod 3 Arresting Gear Configured With Sheav

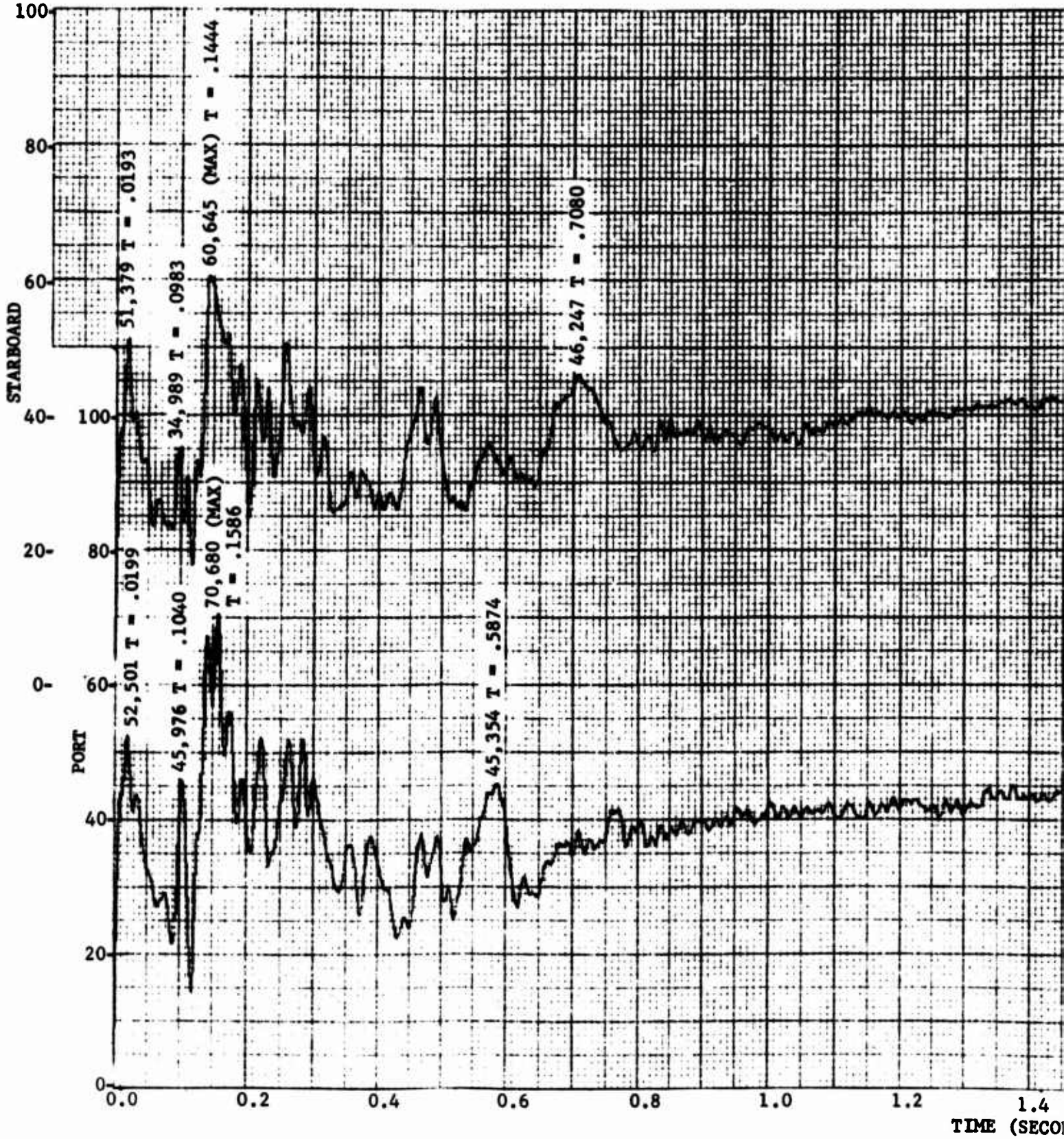
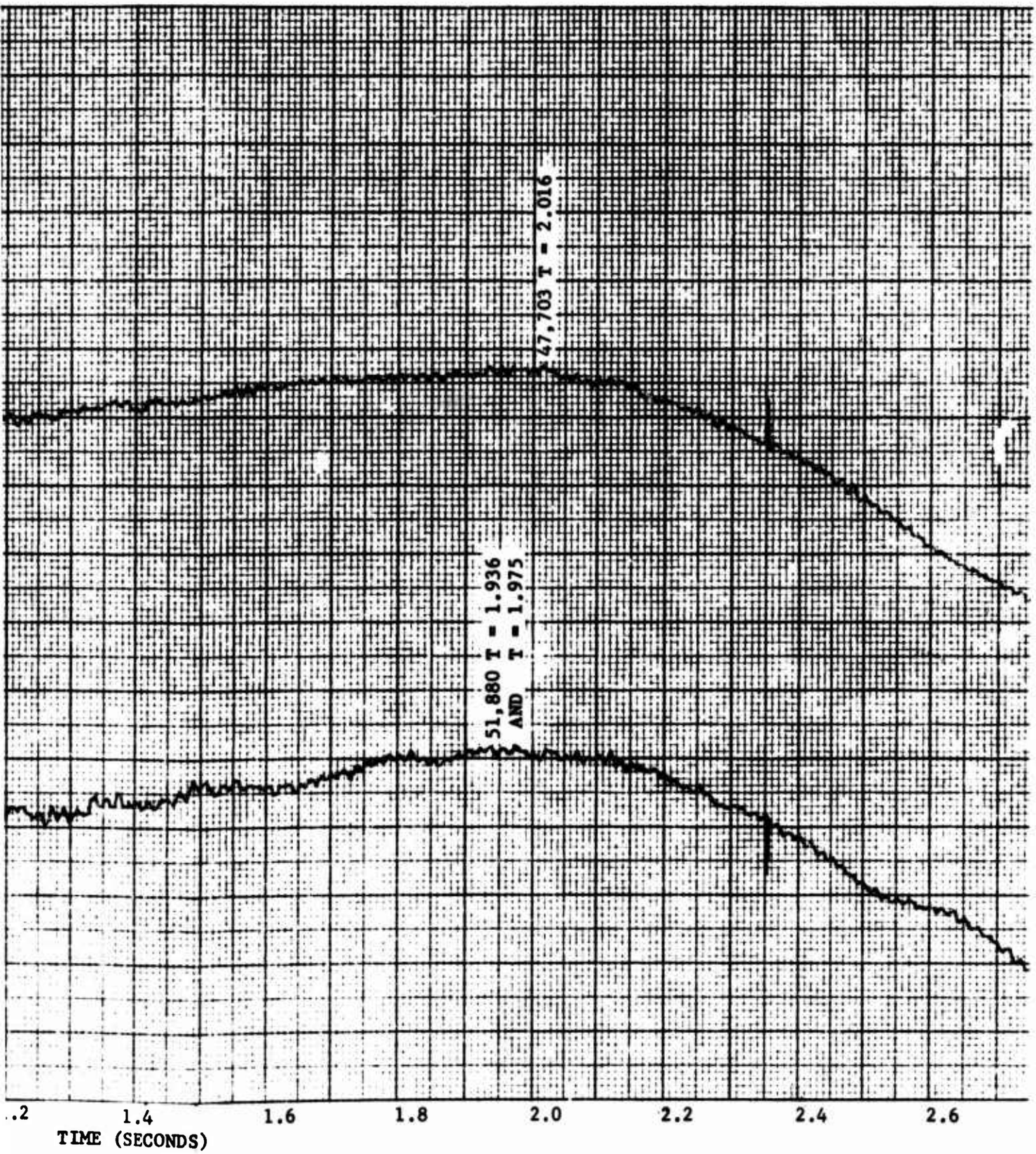


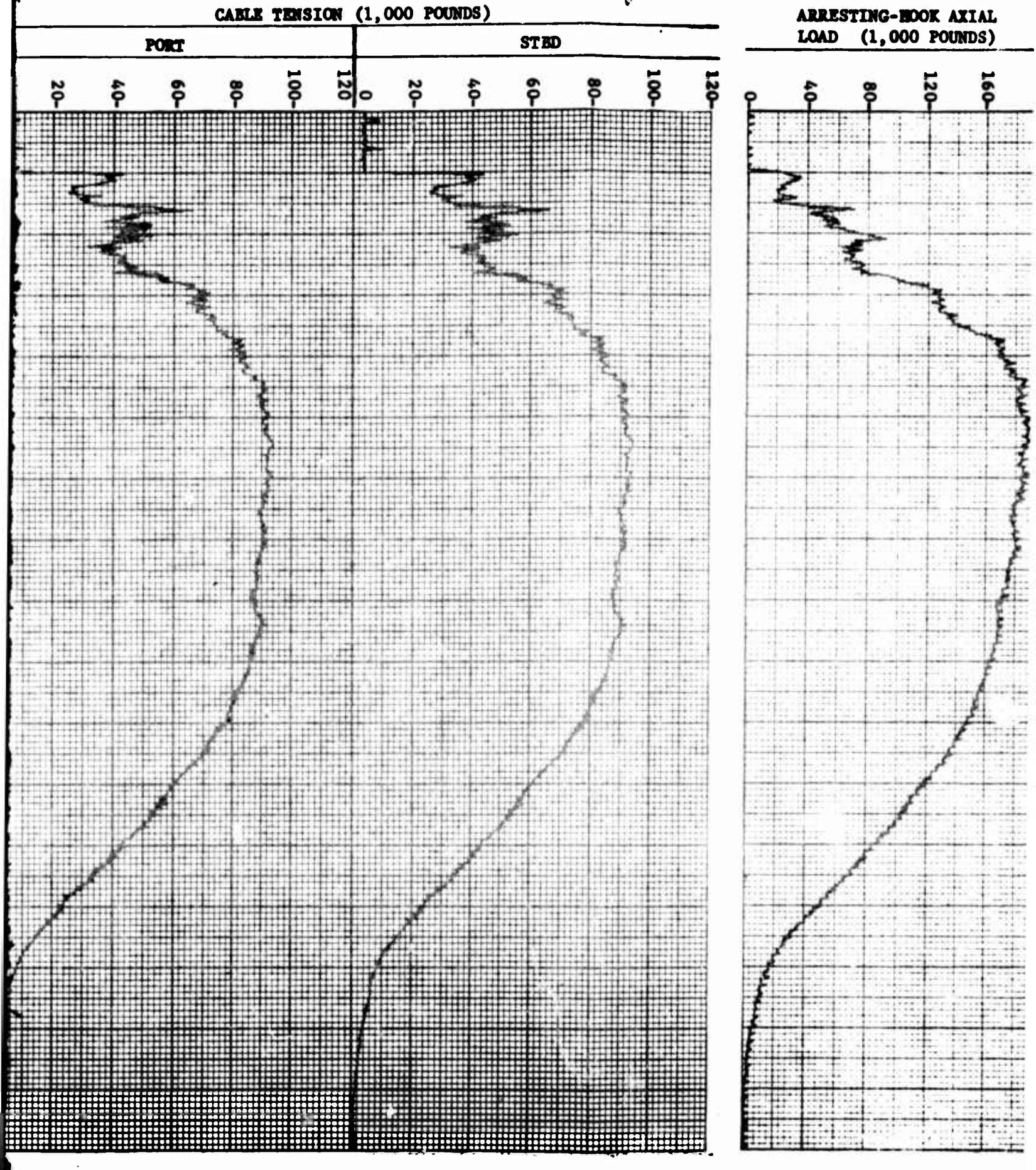
Figure 29 - Frequency Response Characteristics of Port and Starboard Cable Ten
ON-CENTER Arrestment of a 21,400-Pound, F-8 Airc
(Mark 7 Mod 3 Arresting Gear Configured With Sheav

A



board Cable Tensions Filtered to a Frequency of 60 Hz During Event 21668,
0-Pound,F-8 Aircraft at an Engaging Speed of 138 Knots
gured With Sheave Dampers, Using an Actual Weight Setting)

B


CABLE TENSION (1,000 POUNDS)
PORT
STBD
20
40
60
80
100
120
0
20
40
60
80
100
120
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

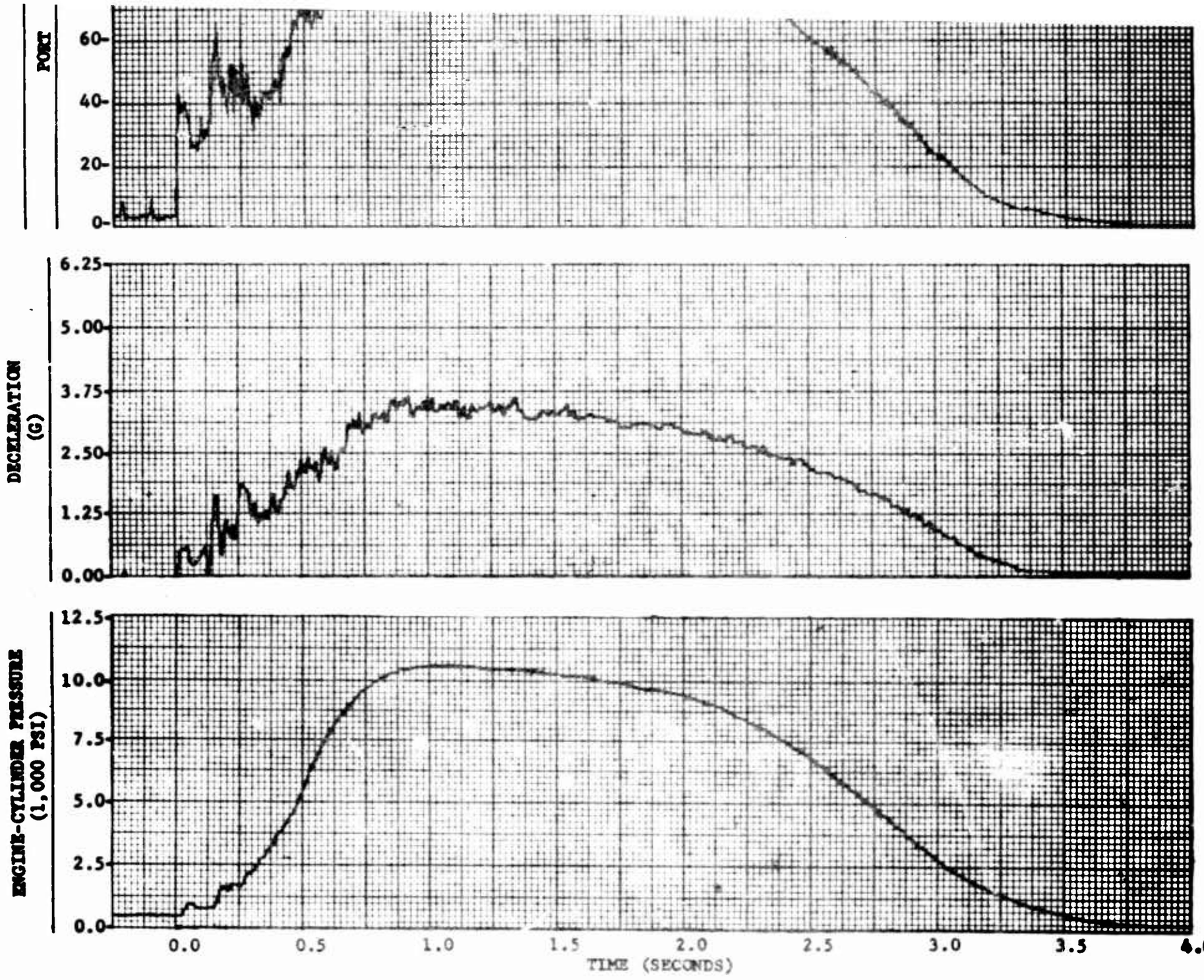
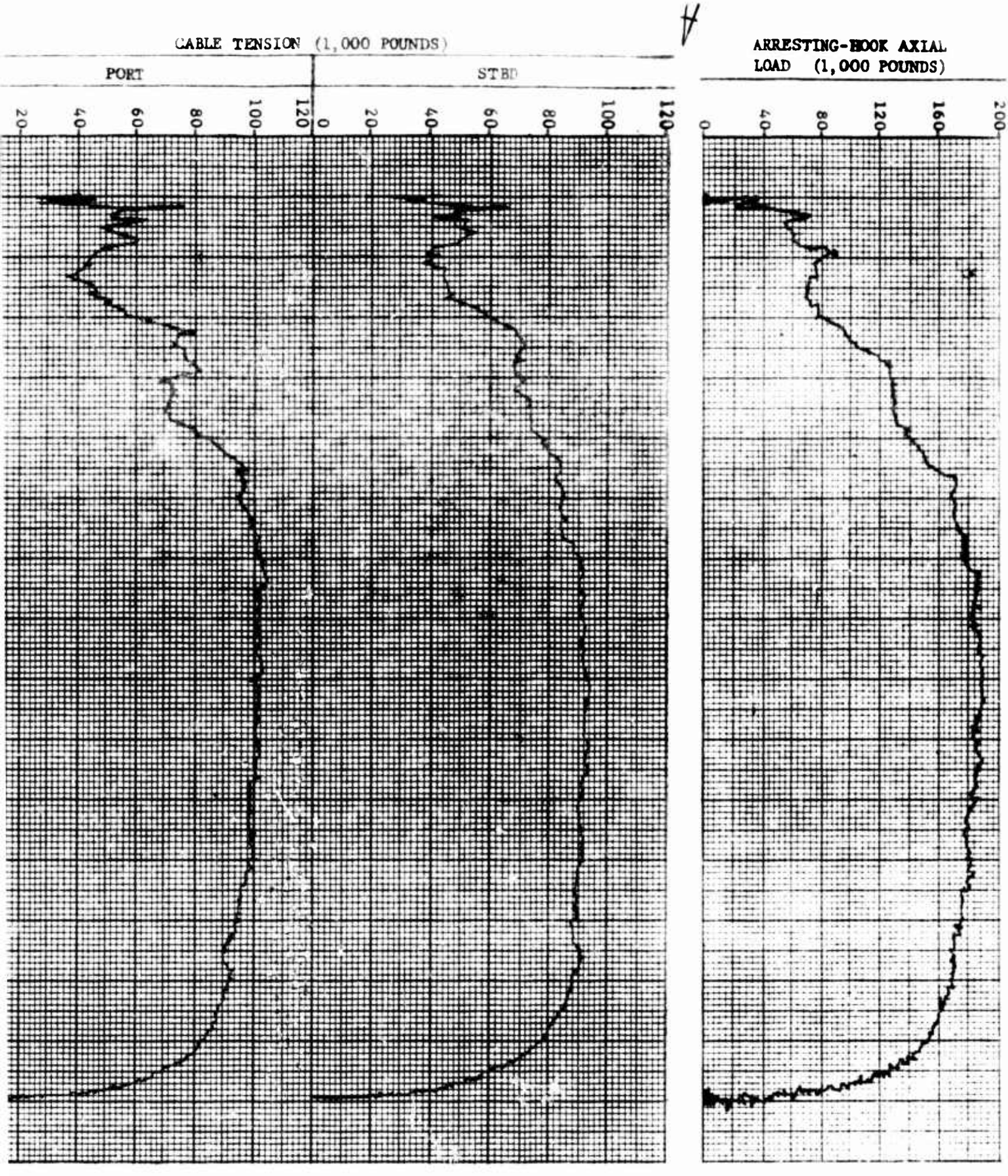
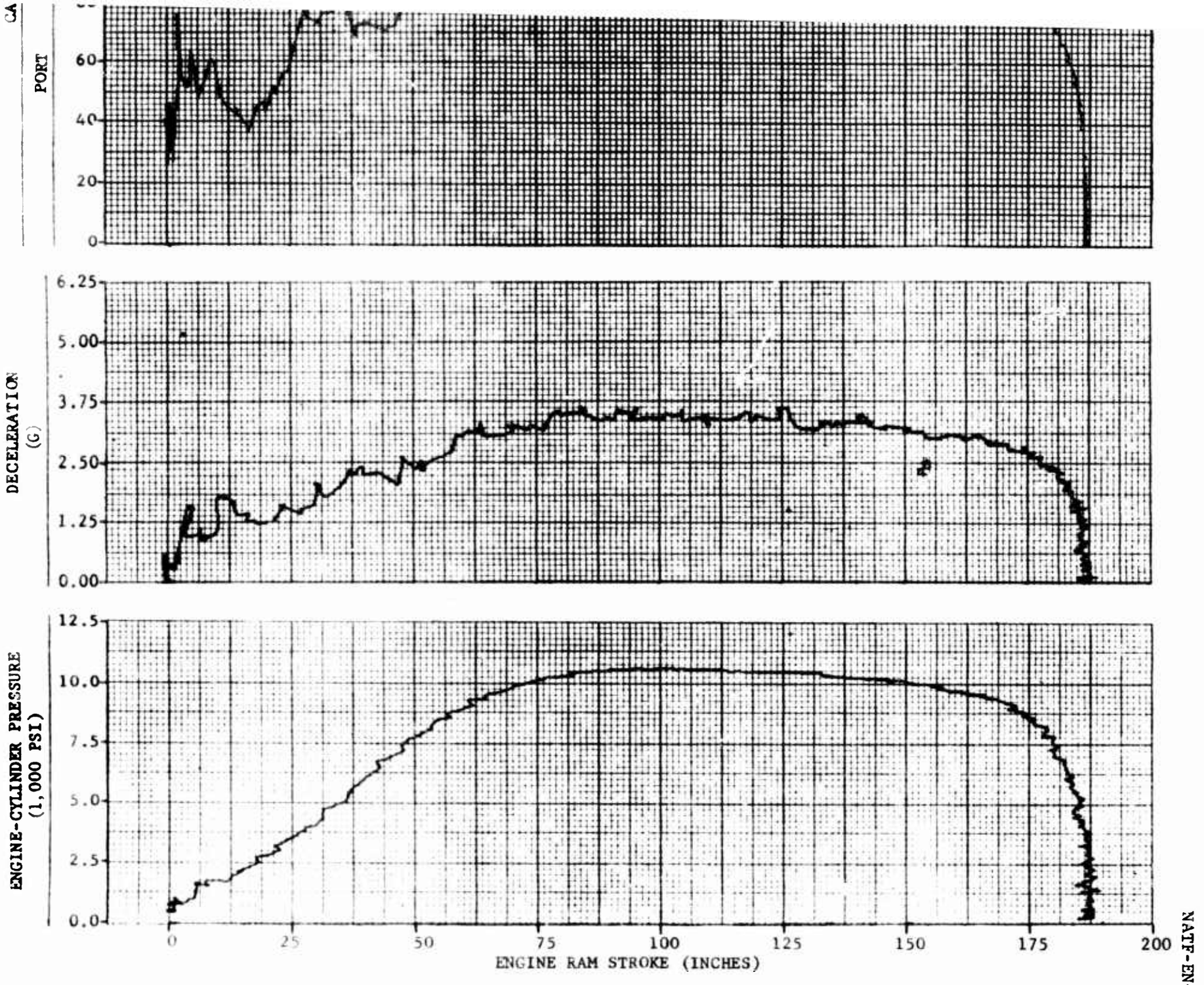


Figure A1 - Time History of Event 21652: ON-CENTER Arrestment of a 46,700-Pound A-3A Aircraft at an Engaging Speed of 137 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers)

APPENDIX A - TIME HISTORIES OF HIGH-ENERGY, ON-CENTER ARRESTMENTS


CABLE TENSION (1,000 POUNDS)
PORT
STBD
20
40
60
80
100
120
0
20
40
60
80
100
120
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160
200

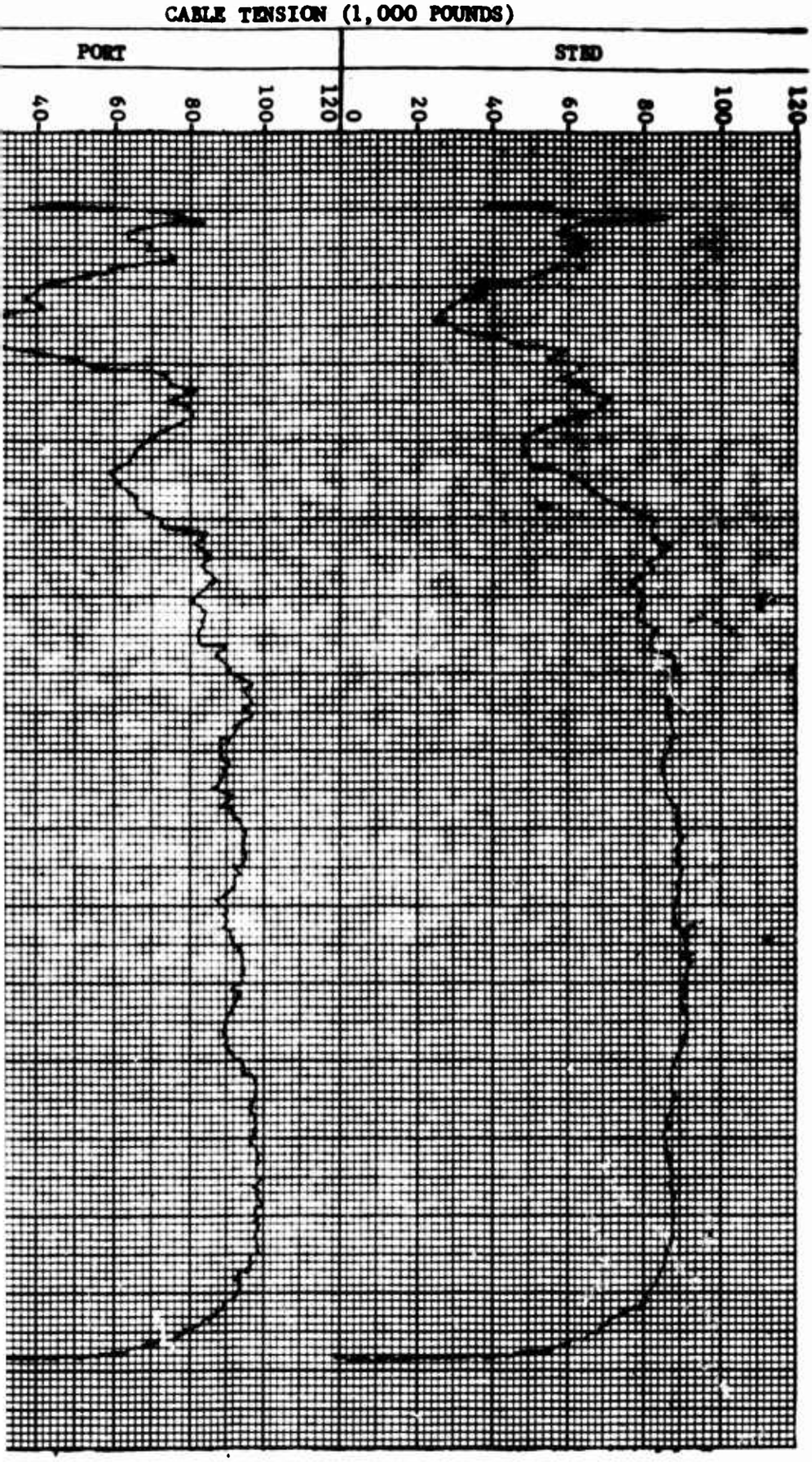


NATF-EN-1100

Figure A1 - Continued

4

CABLE TENSION (1,000 POUNDS)



ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)

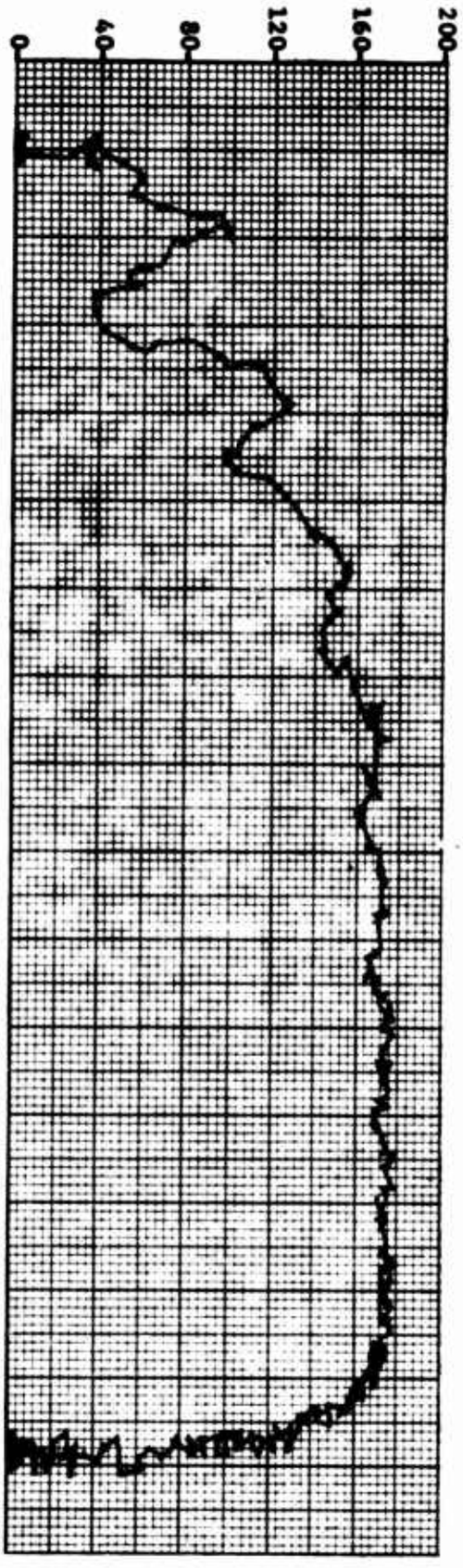


Figure A2 - Continue

B

ARRESTING-HOOK AXIAL
LOAD (1,000 POUNDS)
160
120
80
40
0

CABLE TENSION (1,000 POUNDS)
STBD
PORT
100
80
60
40
20
0
100
80
60
40
20
0
STROKE

H

16.25

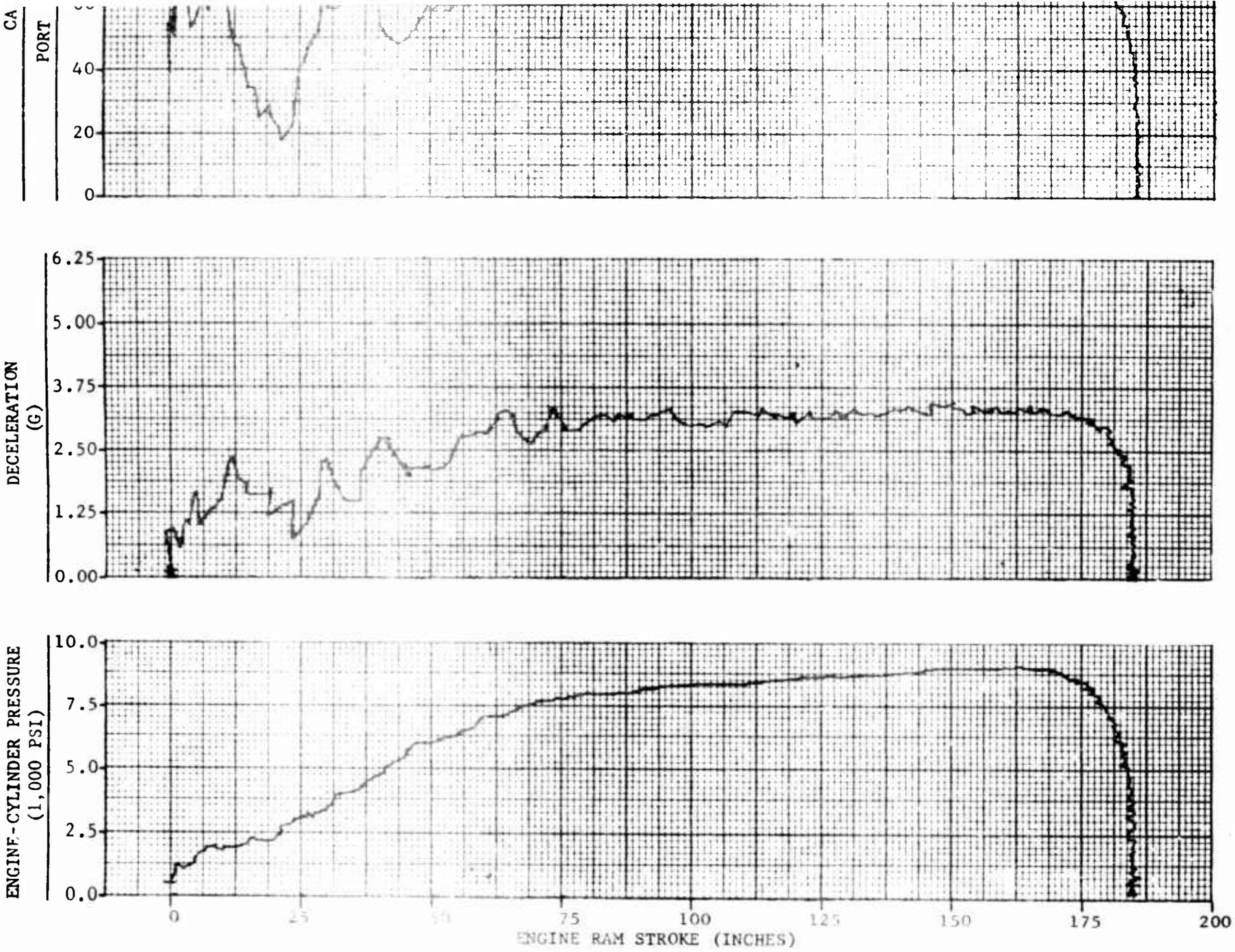
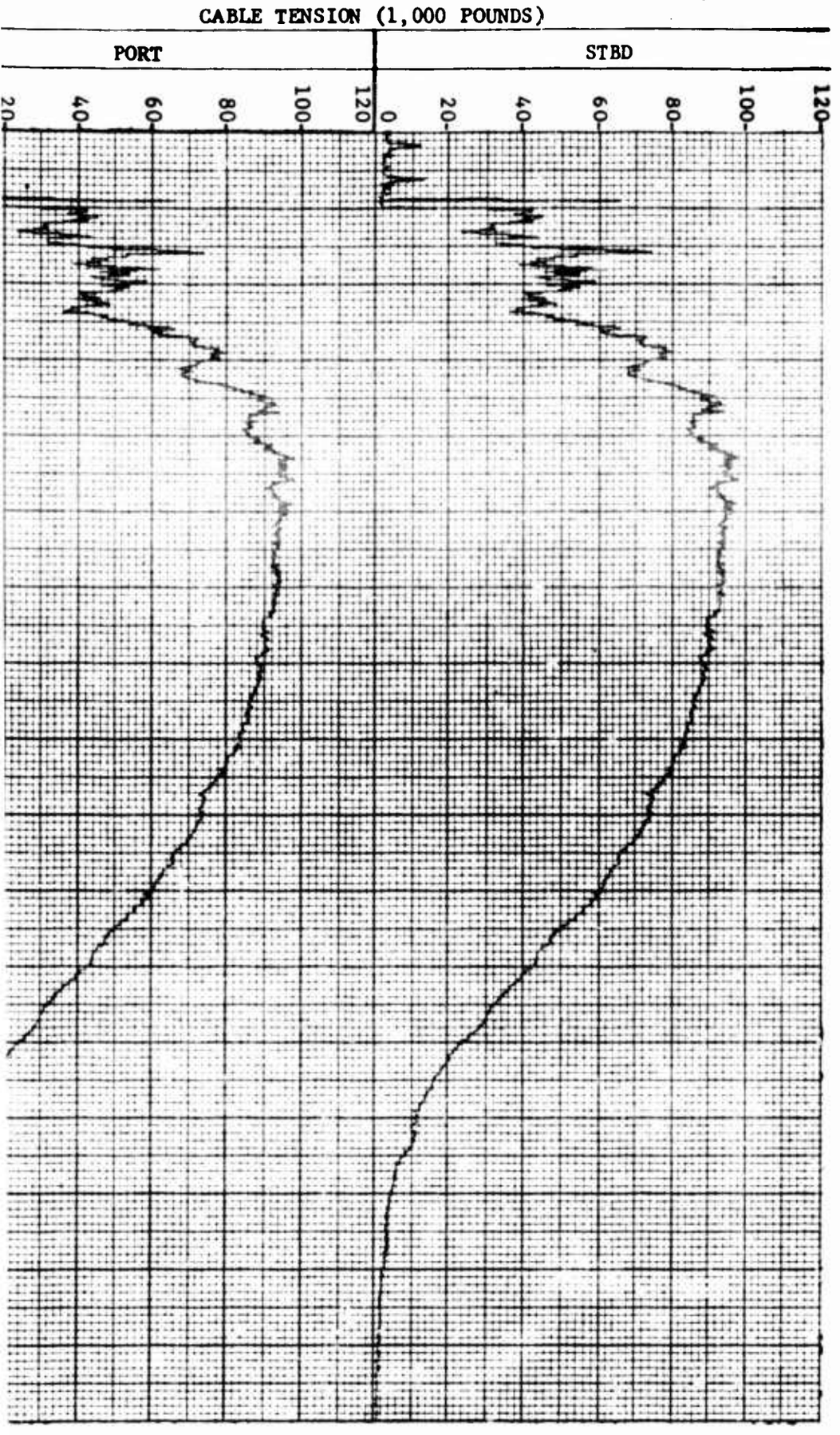
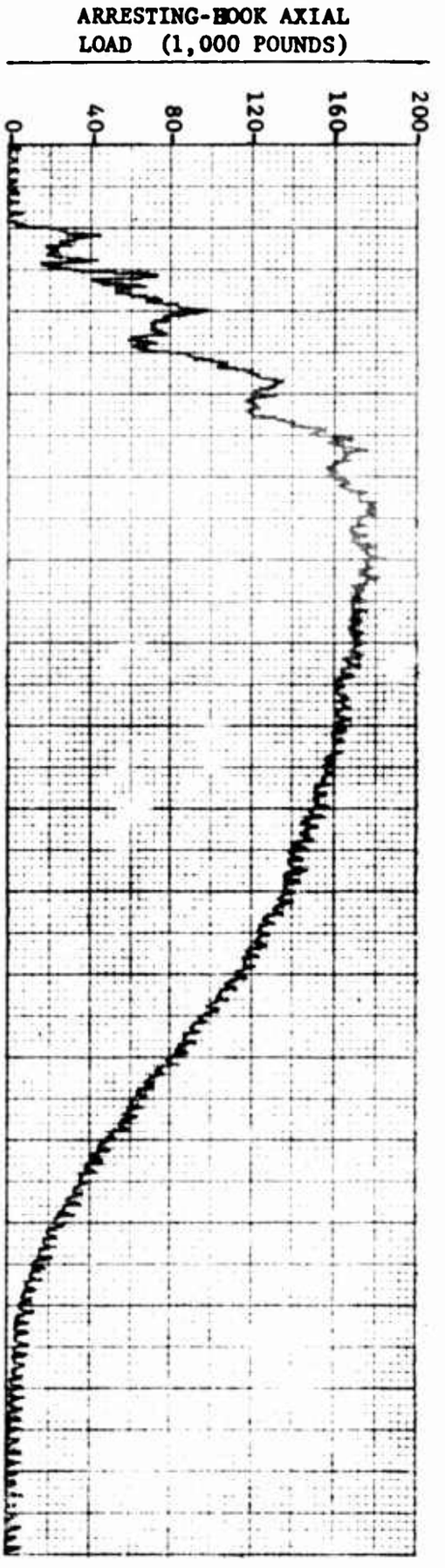


Figure A3 - Continued


CABLE TENSION (1,000 POUNDS)
PORT
STBD
20
40
60
80
100
120
0
20
40
60
80
100
120


ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160
200

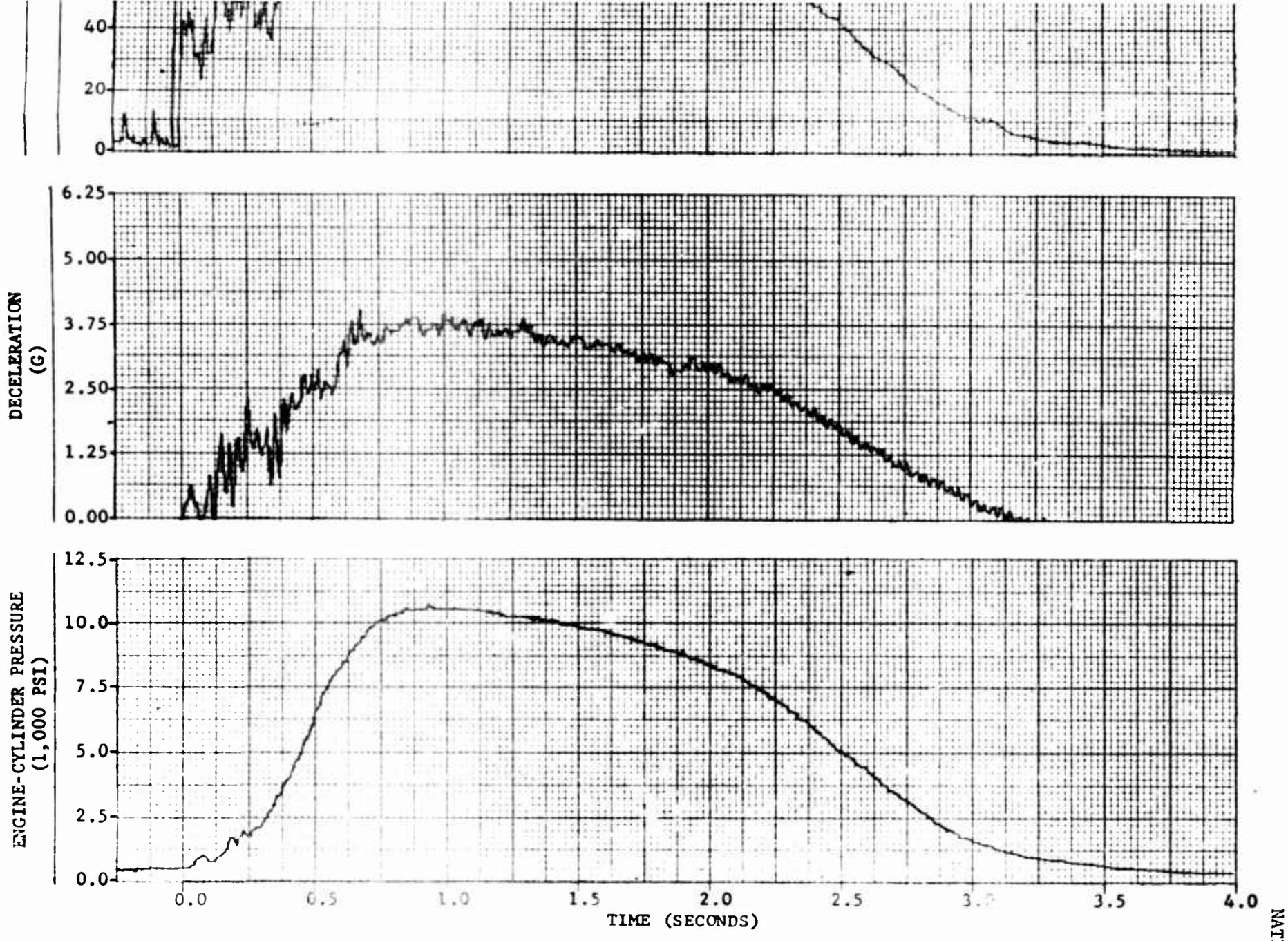
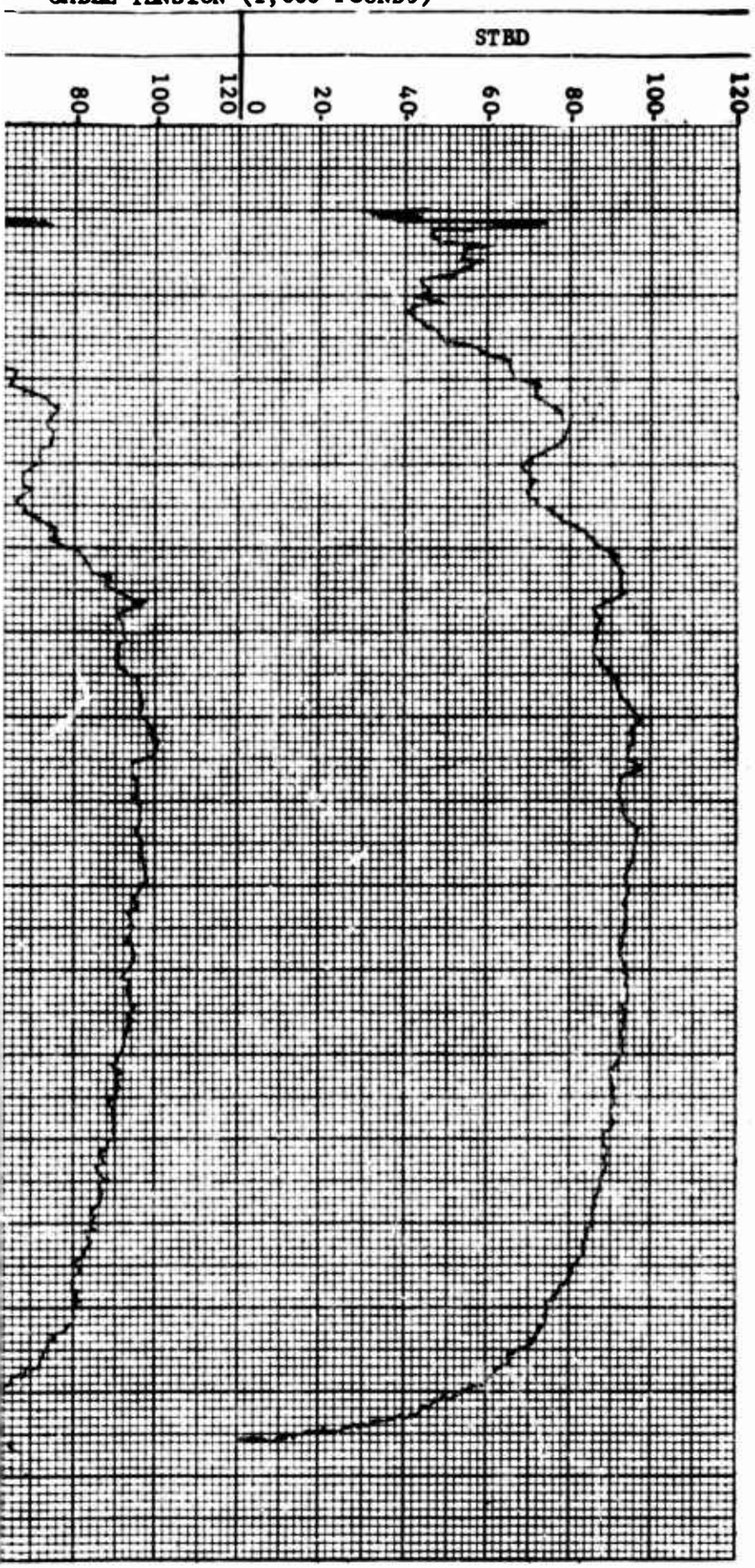
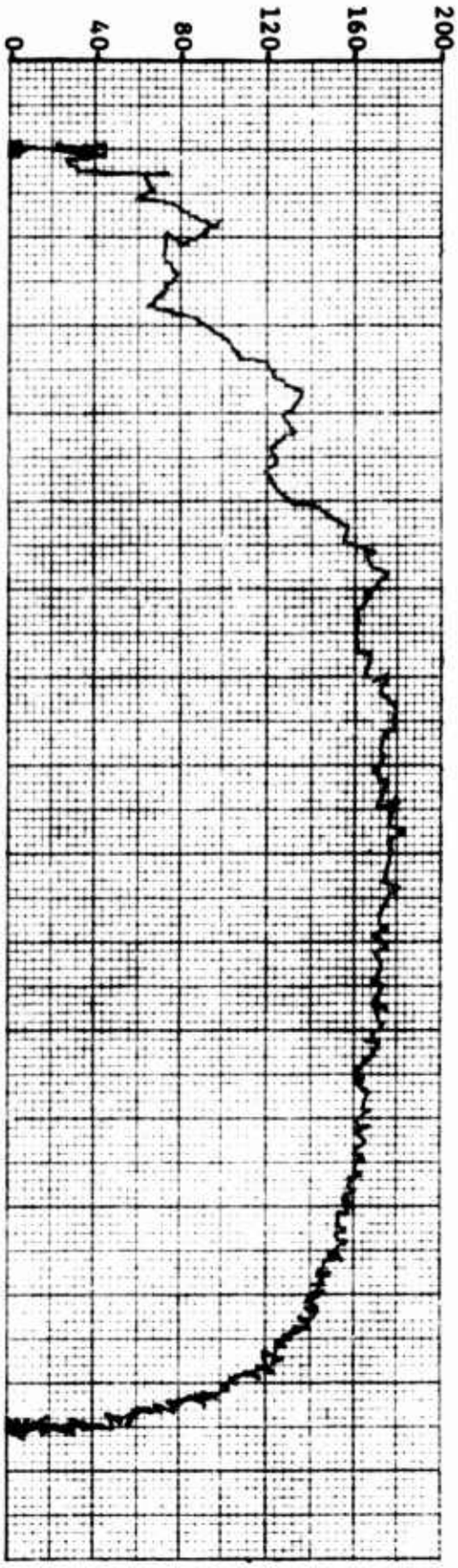


Figure A4 - The Plot of Event 22000: ON-CENTER Arrestment of a 40,600-Pound [illegible] at an Engaging Speed of 146 Knots (Mark 7 Mod

CABLE TENSION (1,000 POUNDS)



ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)



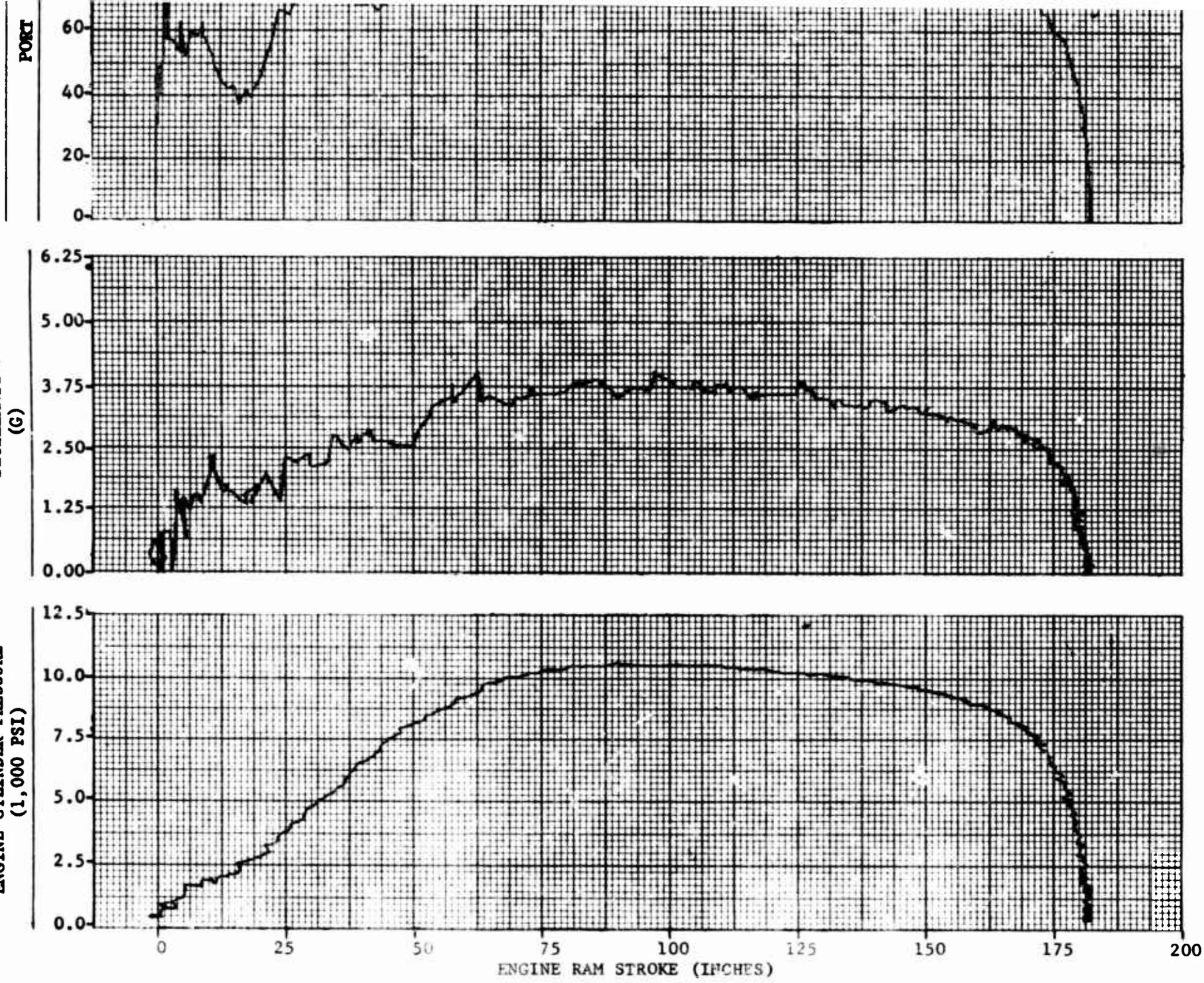


Figure A4 - Continued

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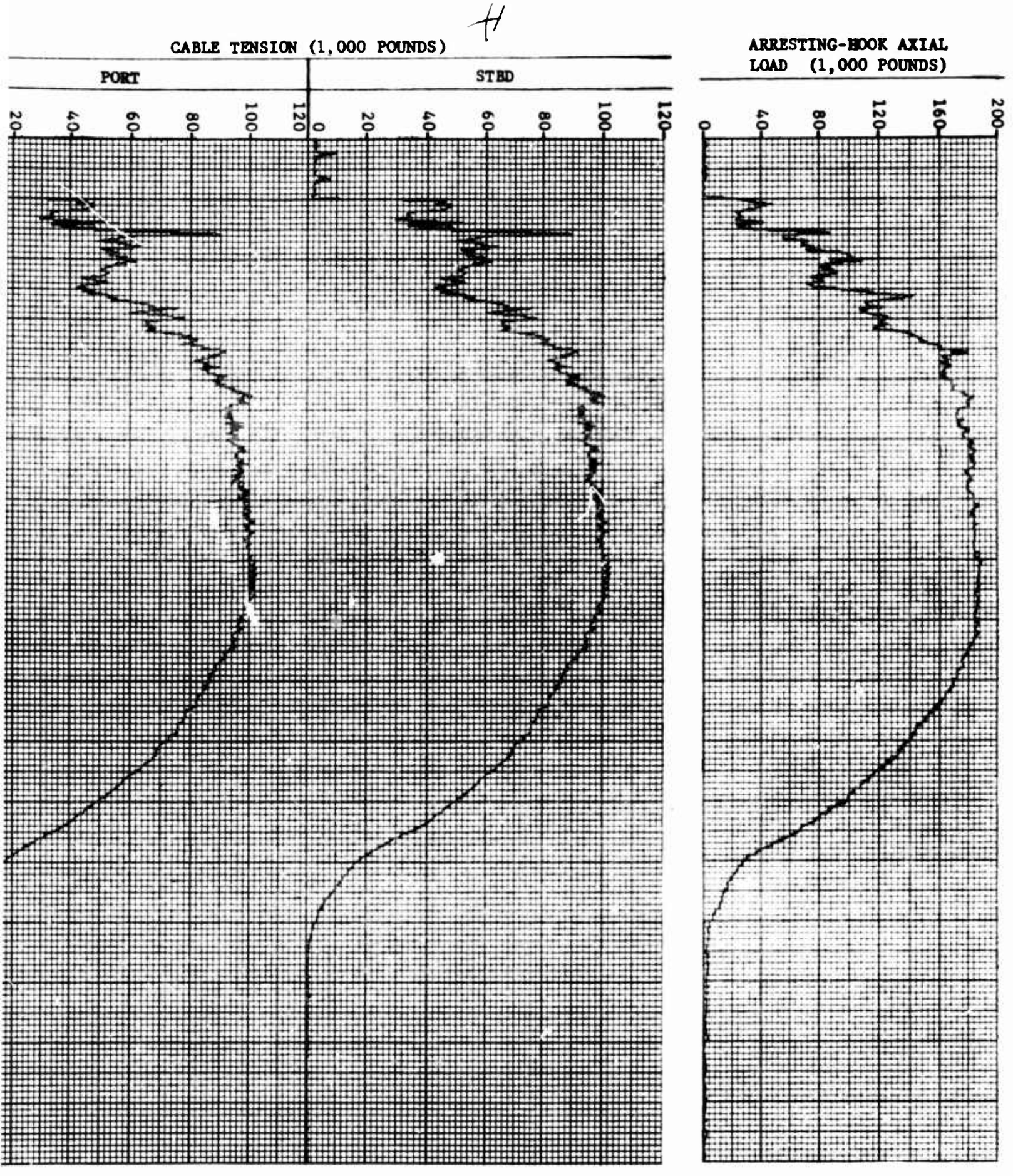

CABLE TENSION (1,000 POUNDS)
PORT
STBD
20
40
60
80
100
120
0
20
40
60
80
100
120
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160
200

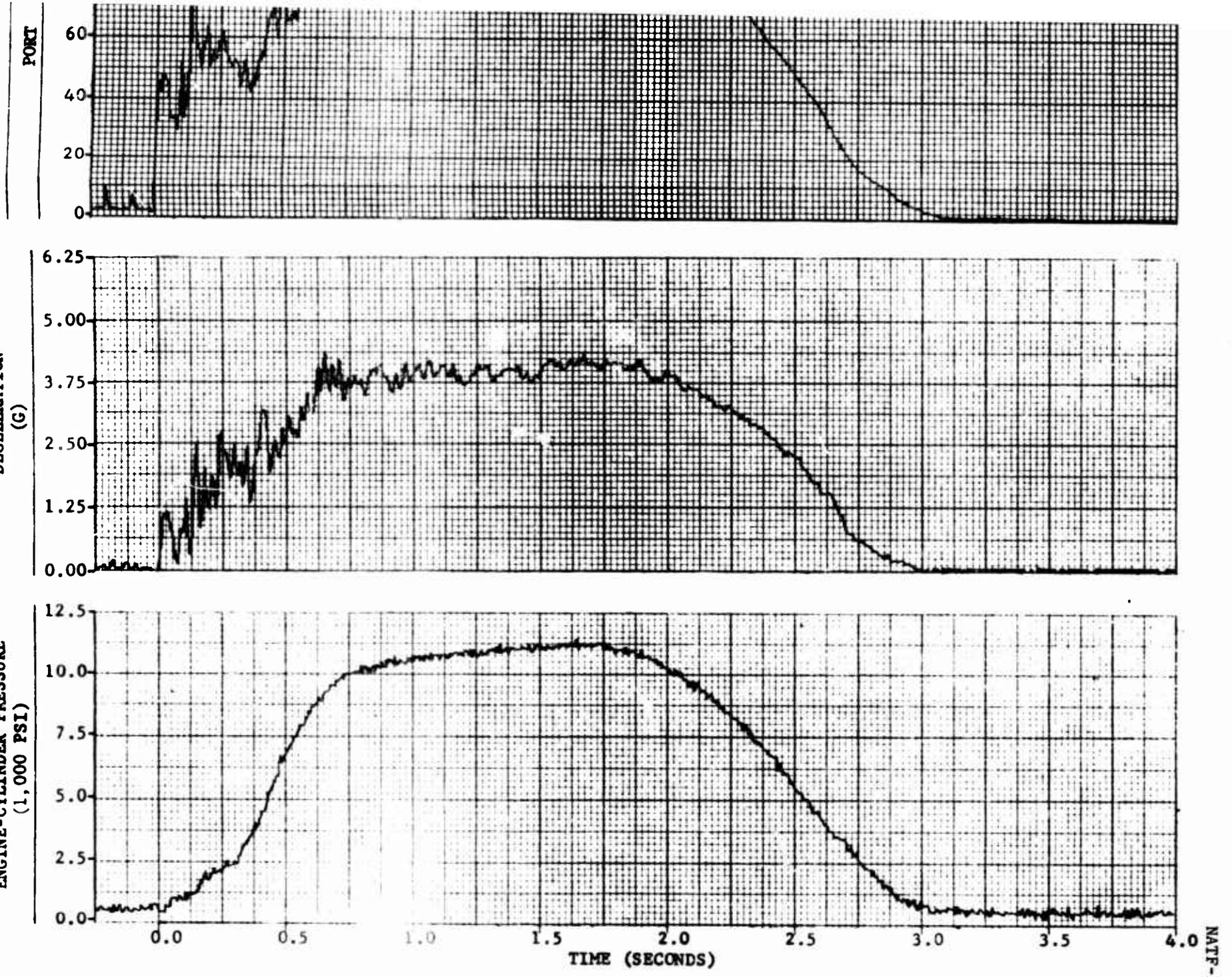


Figure A5 - Time History of Event 22002: ON-CENTER Arrestment of a 41,600-Pound A-3A Aircraft at an Engaging Speed of 154 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers)

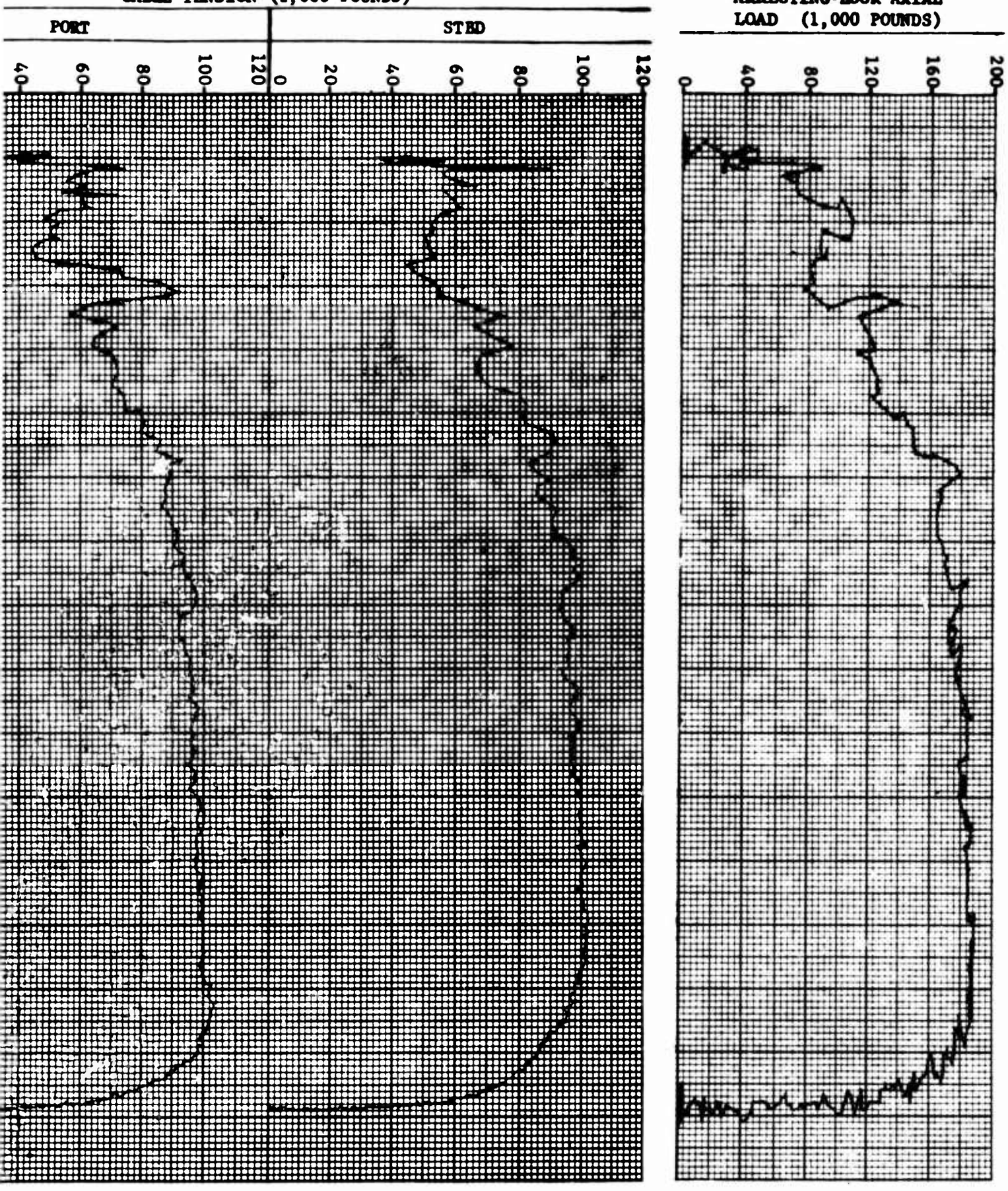

CABLE TENSION (1,000 POUNDS)
PORT
STBD
40
60
80
100
120
0
20
40
60
80
100
120
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160
200

Figure A5 - Continued

ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
160
120
80
40
0

CABLE TENSION (1,000 POUNDS)
PORT
STBD
100
80
60
40
20
0

A

16.25

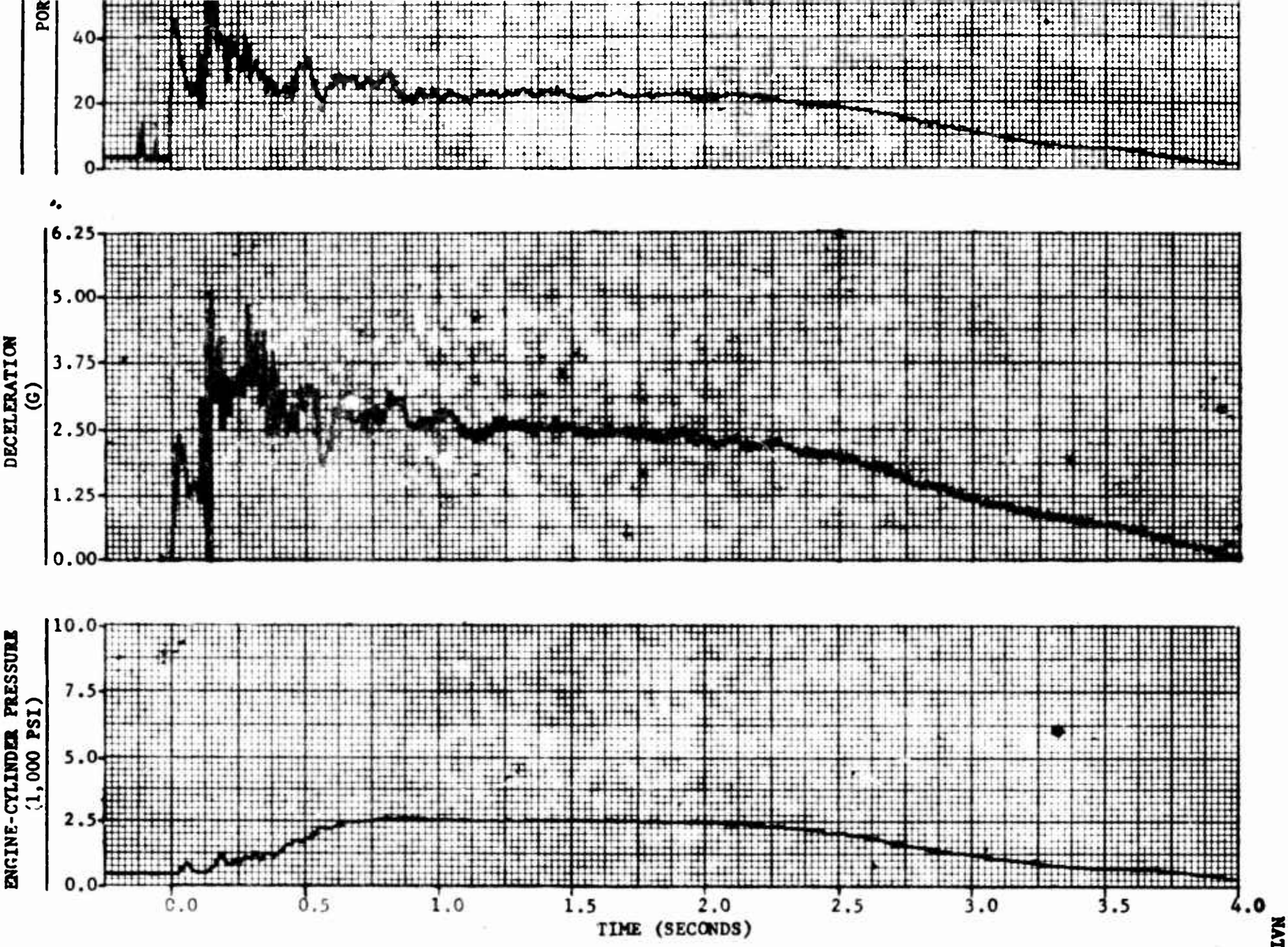
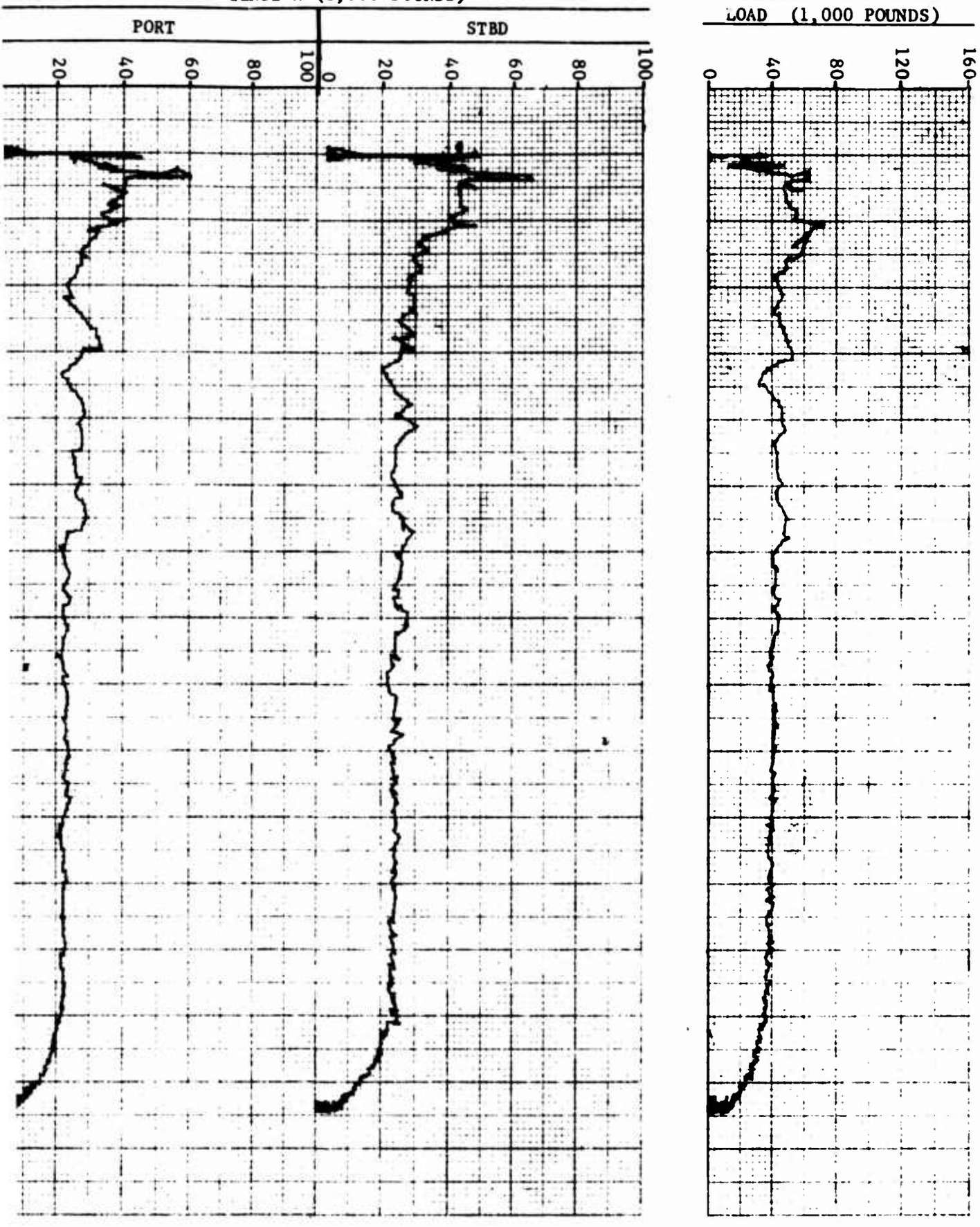


Figure A6 - Time History of Event 21961: ON-CENTER Arrestment of a 13,500-Pound A-4B Aircraft at an Engaging Speed of 137 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers)


CABLE TENSION (1,000 POUNDS)
PORT
STBD
20
40
60
80
100
0
20
40
60
80
100

ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

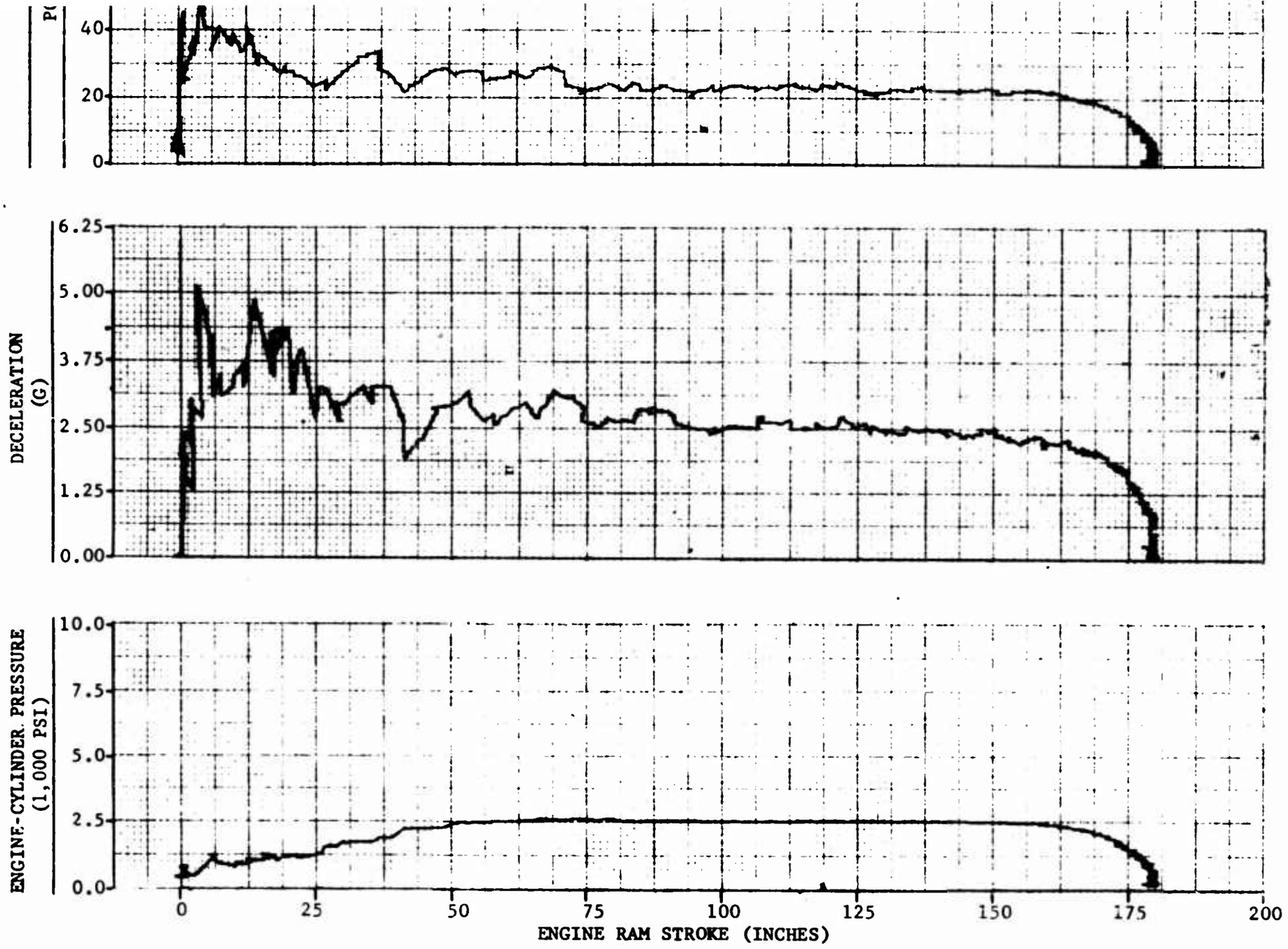
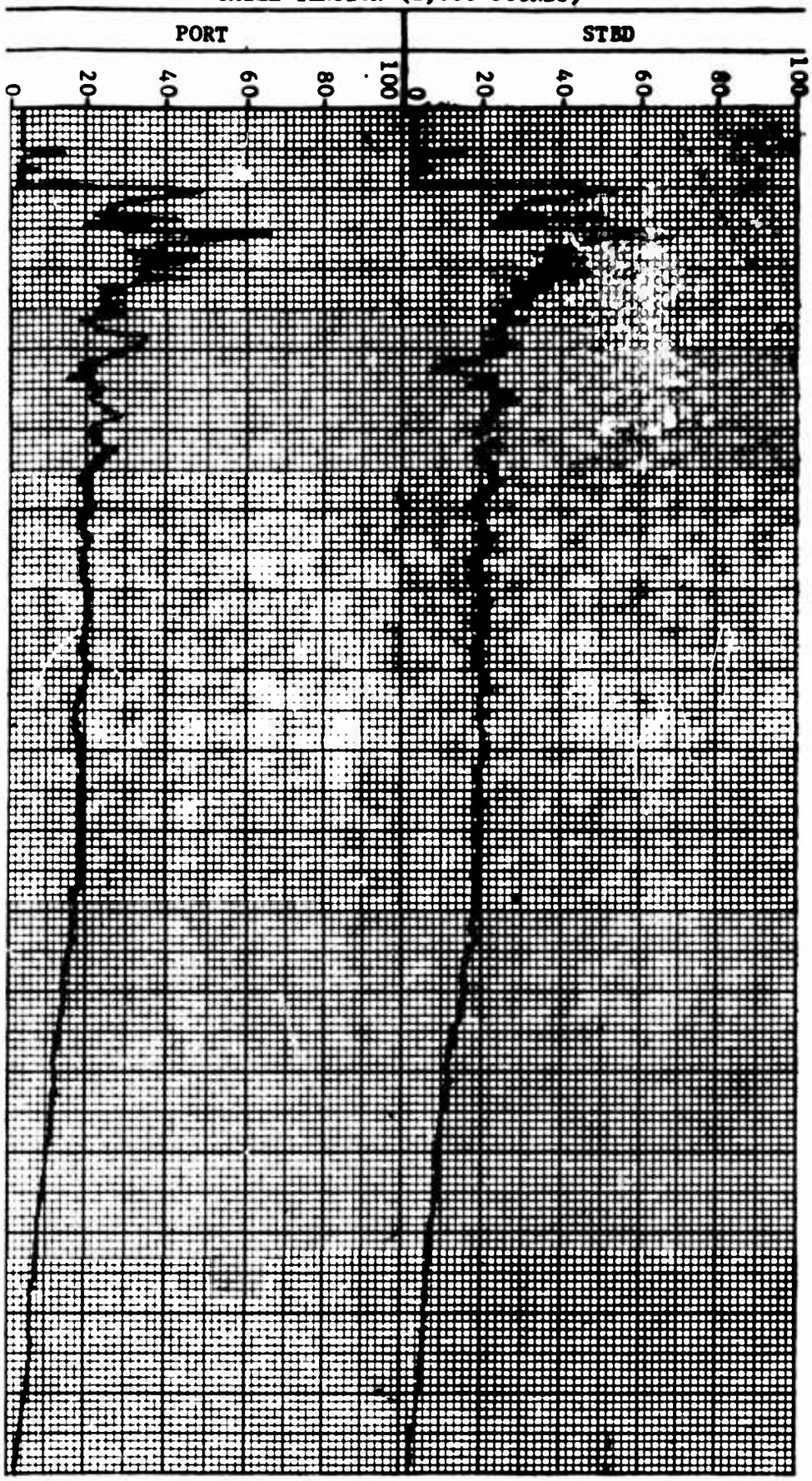
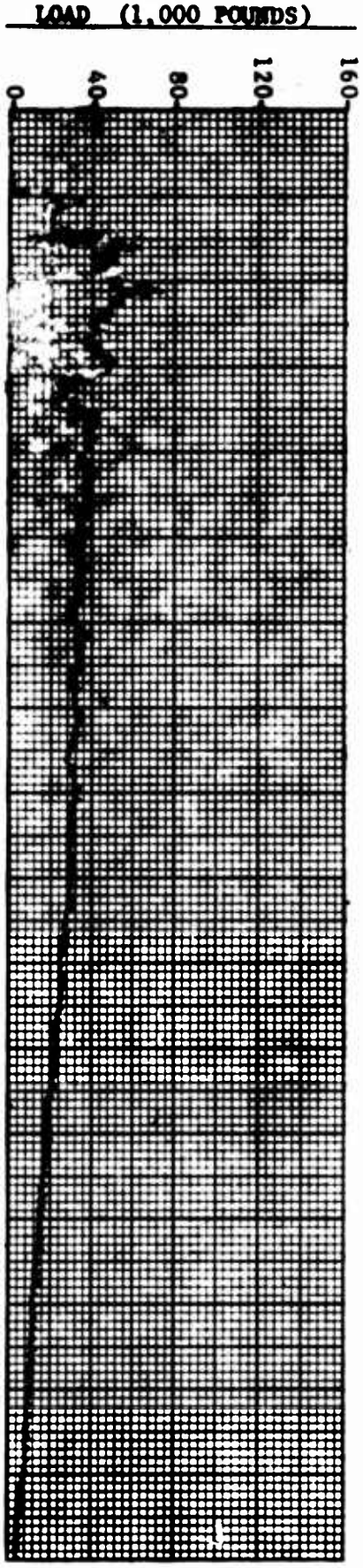


Figure A6 - Continued


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
0
20
40
60
80
100


ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

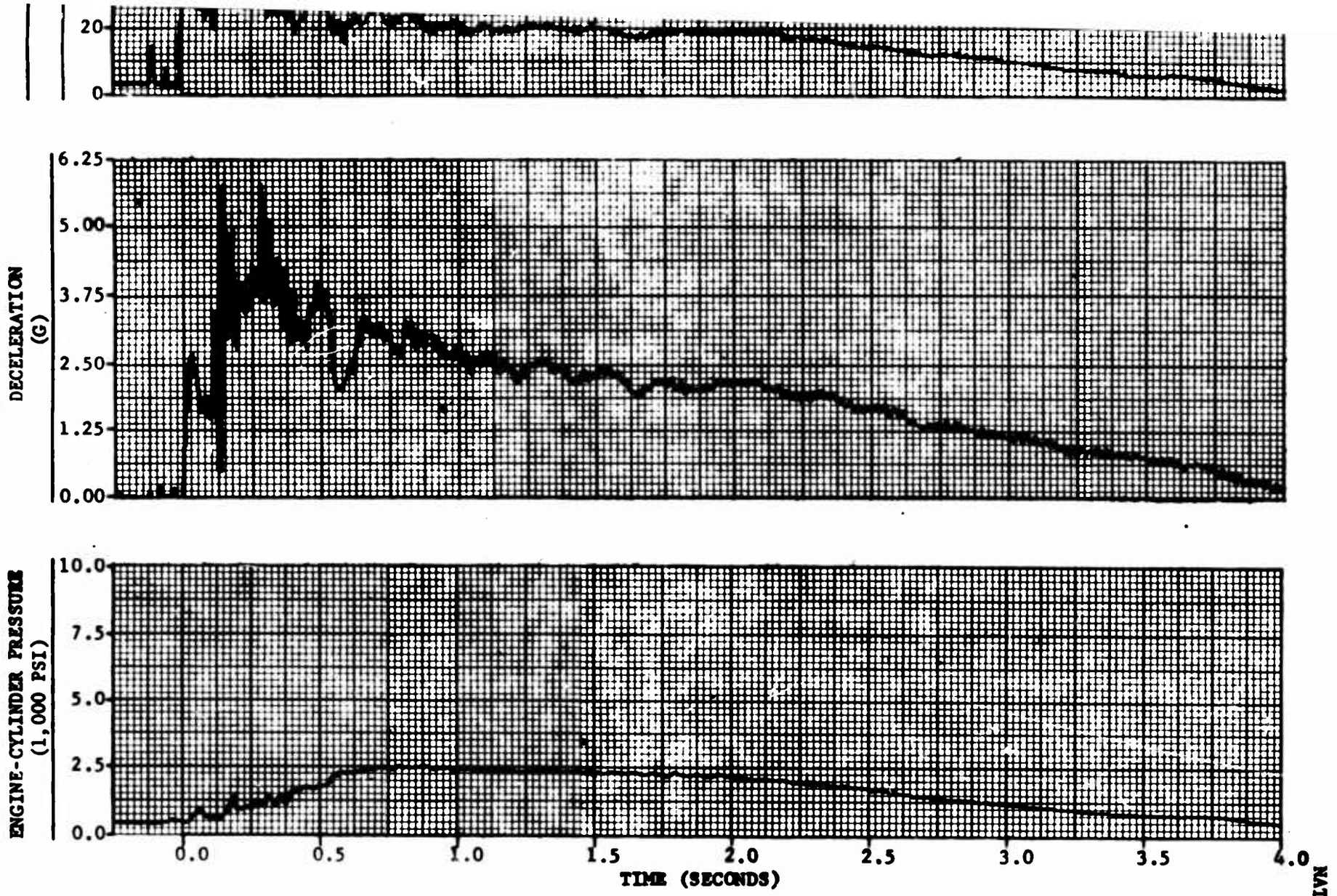
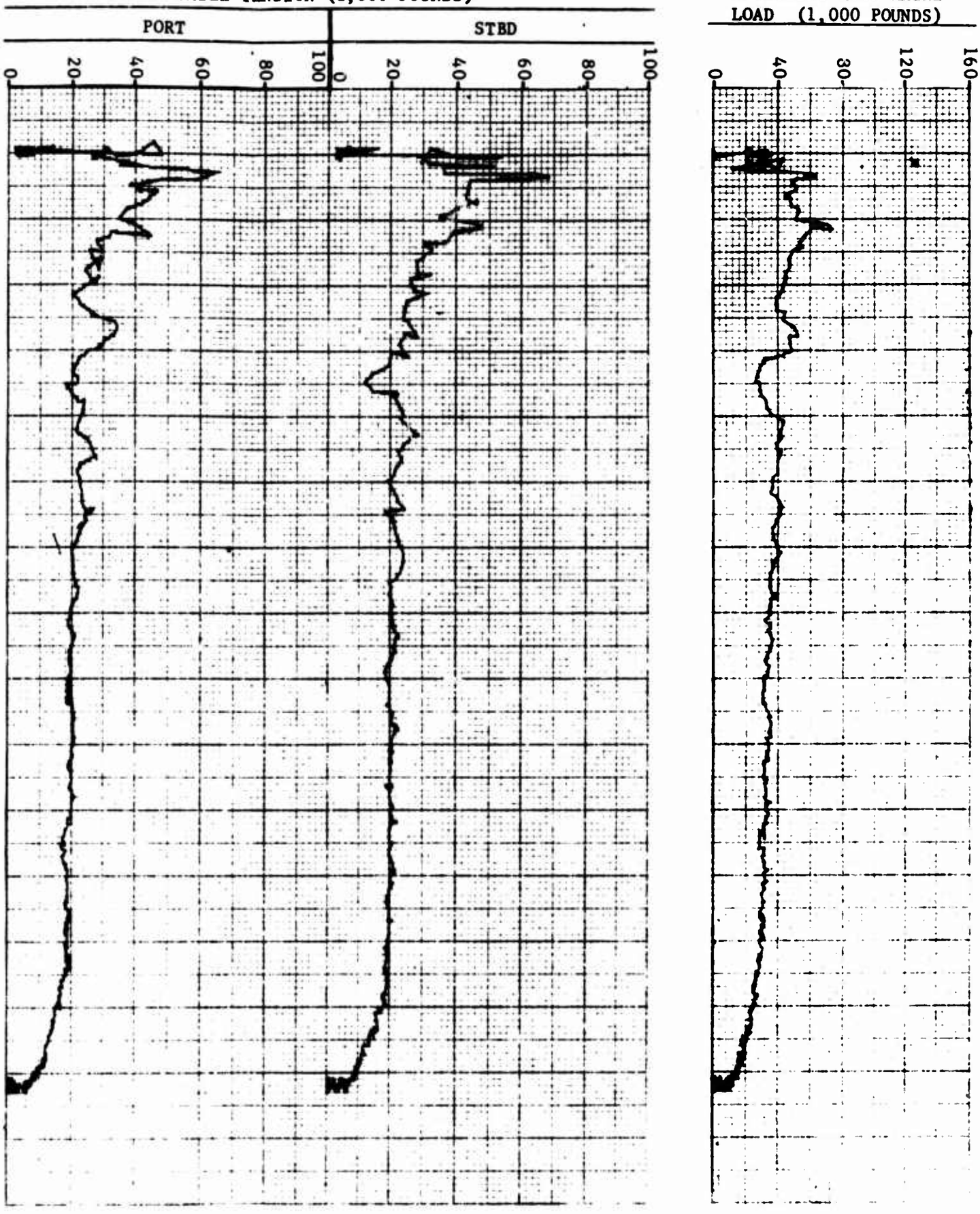


Figure A7 - Time History of Event 21962: ON-CENTER Arrestment of a 12,300-Pound A-4B Aircraft at an Engaging Speed of 139 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers)


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
0
20
40
60
80
100

ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

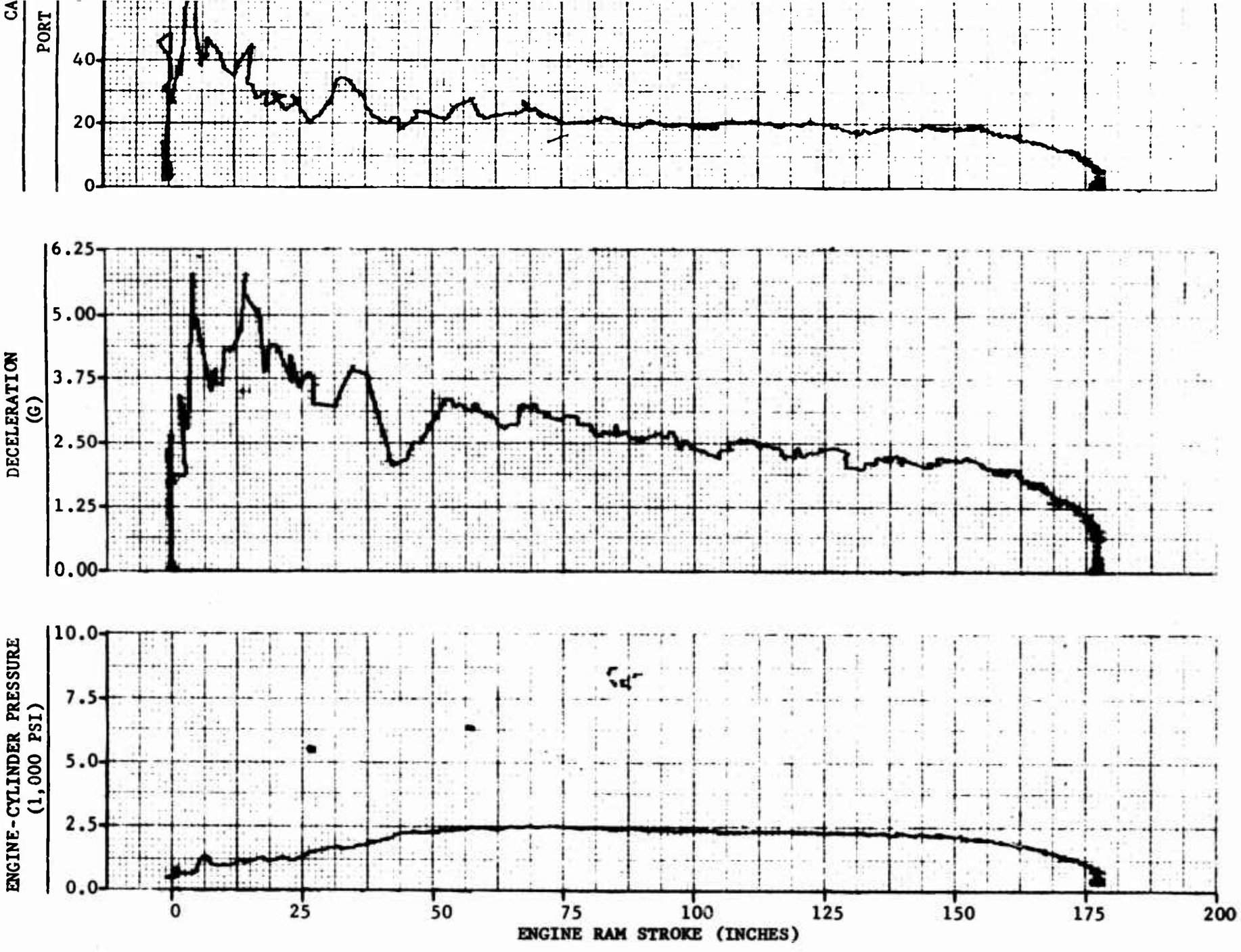
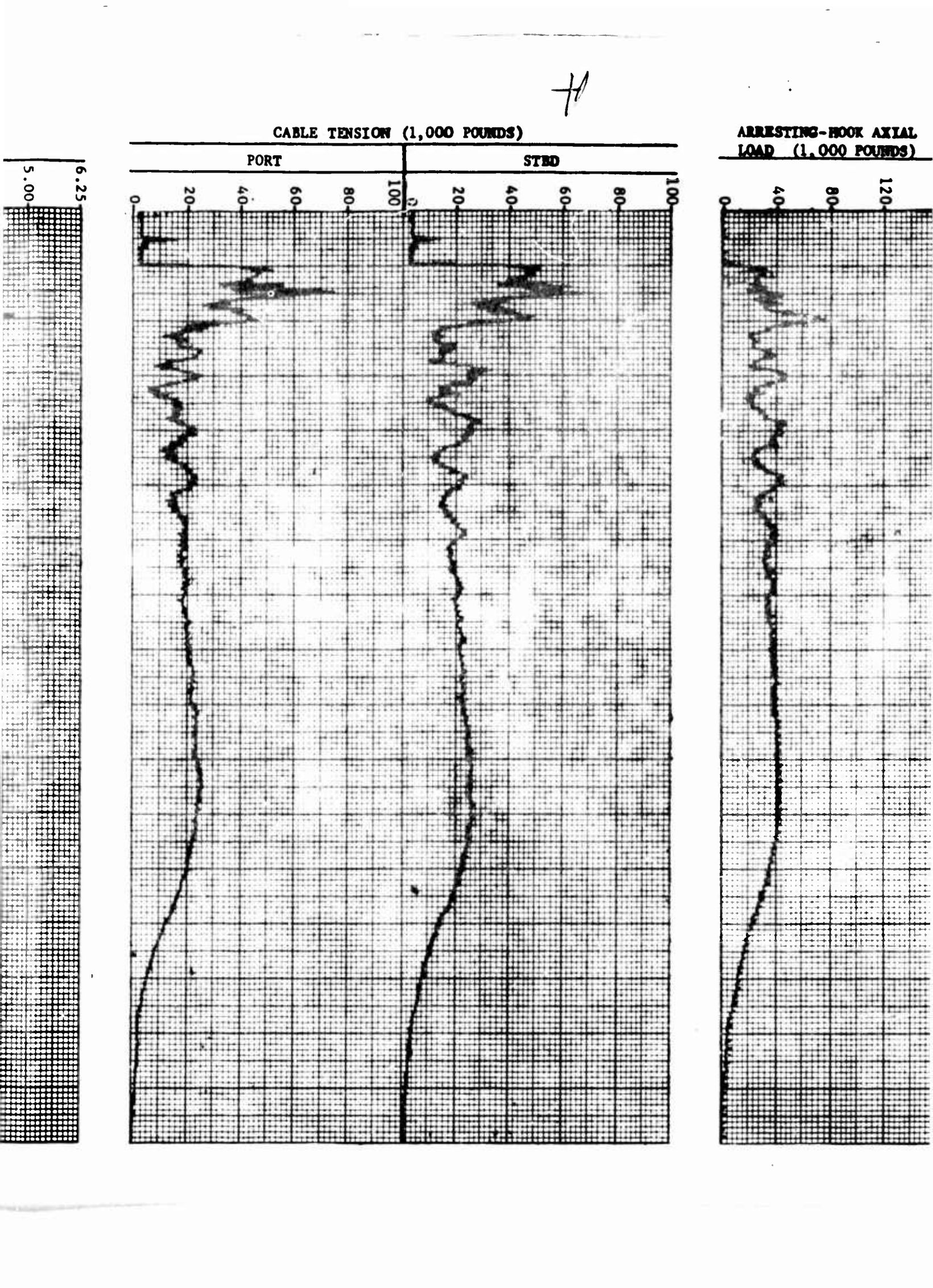


Figure A7 - Continued


5.00
6.25
CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120

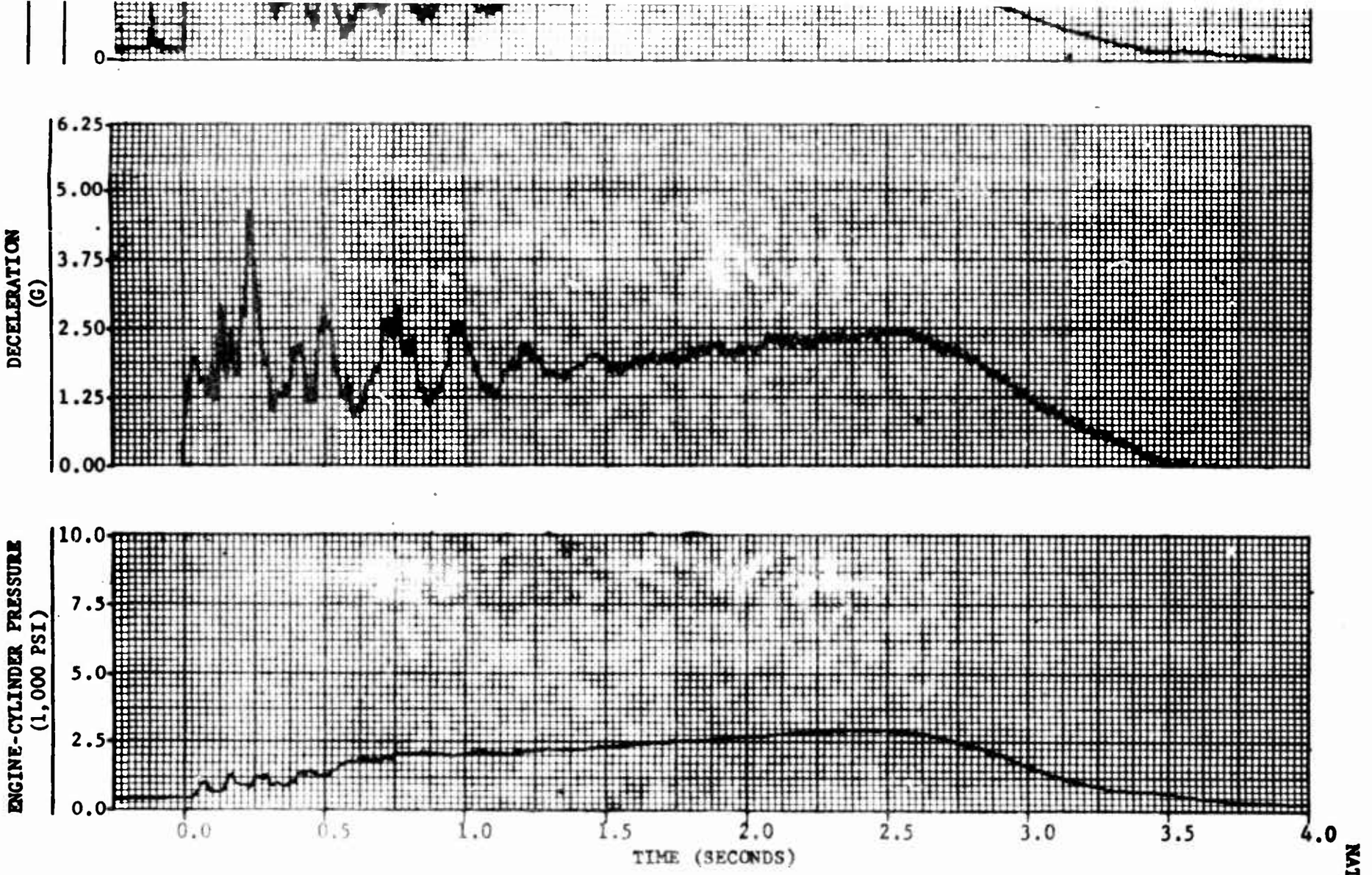
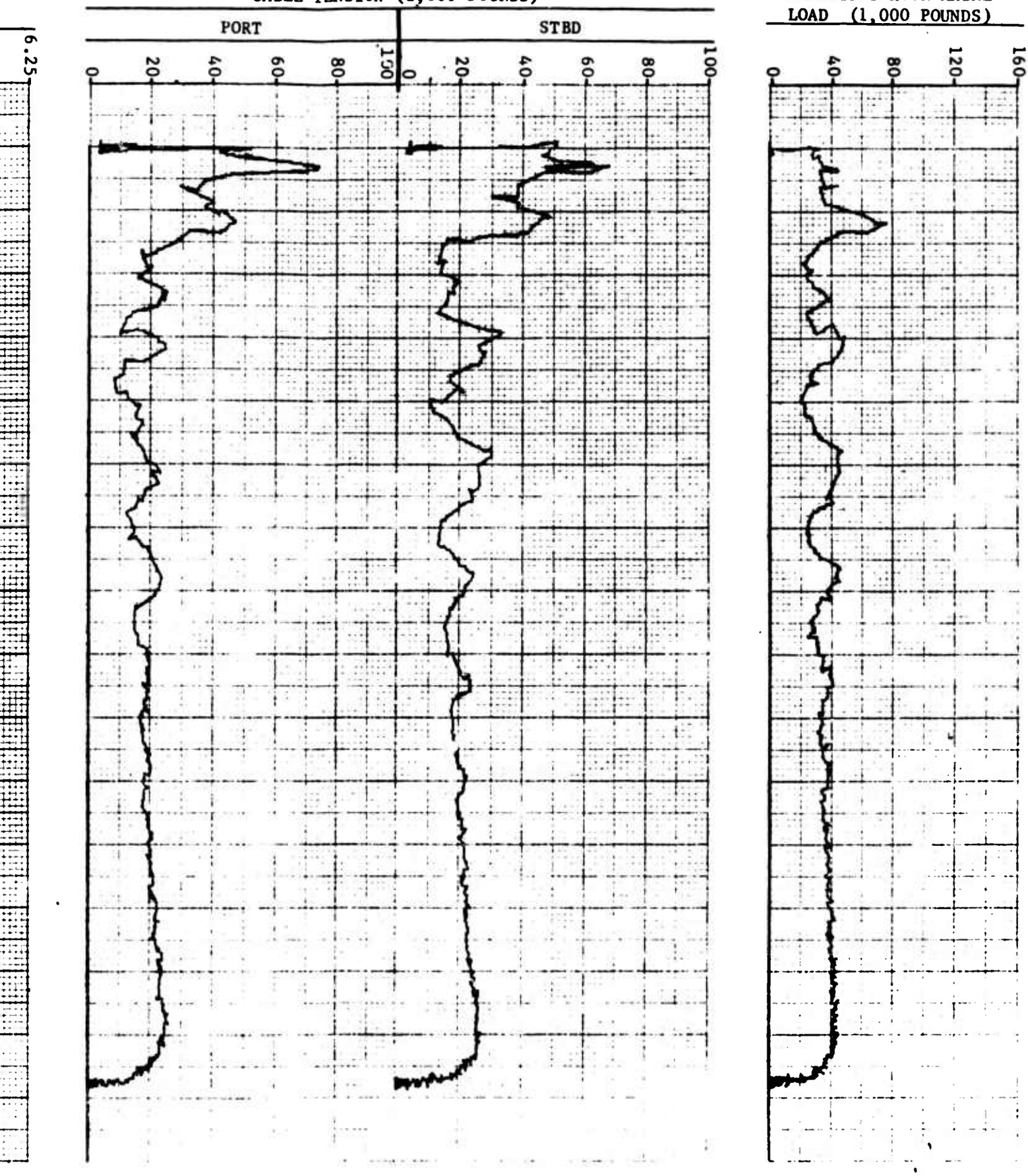


Figure [illegible] - Time History of Event 22137: ON-CENTER Arrestment of a 14,400-Pound [illegible] Aircraft at an Engaging Speed of 124 Knots (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers)

NATF-EN-1100


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
150
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

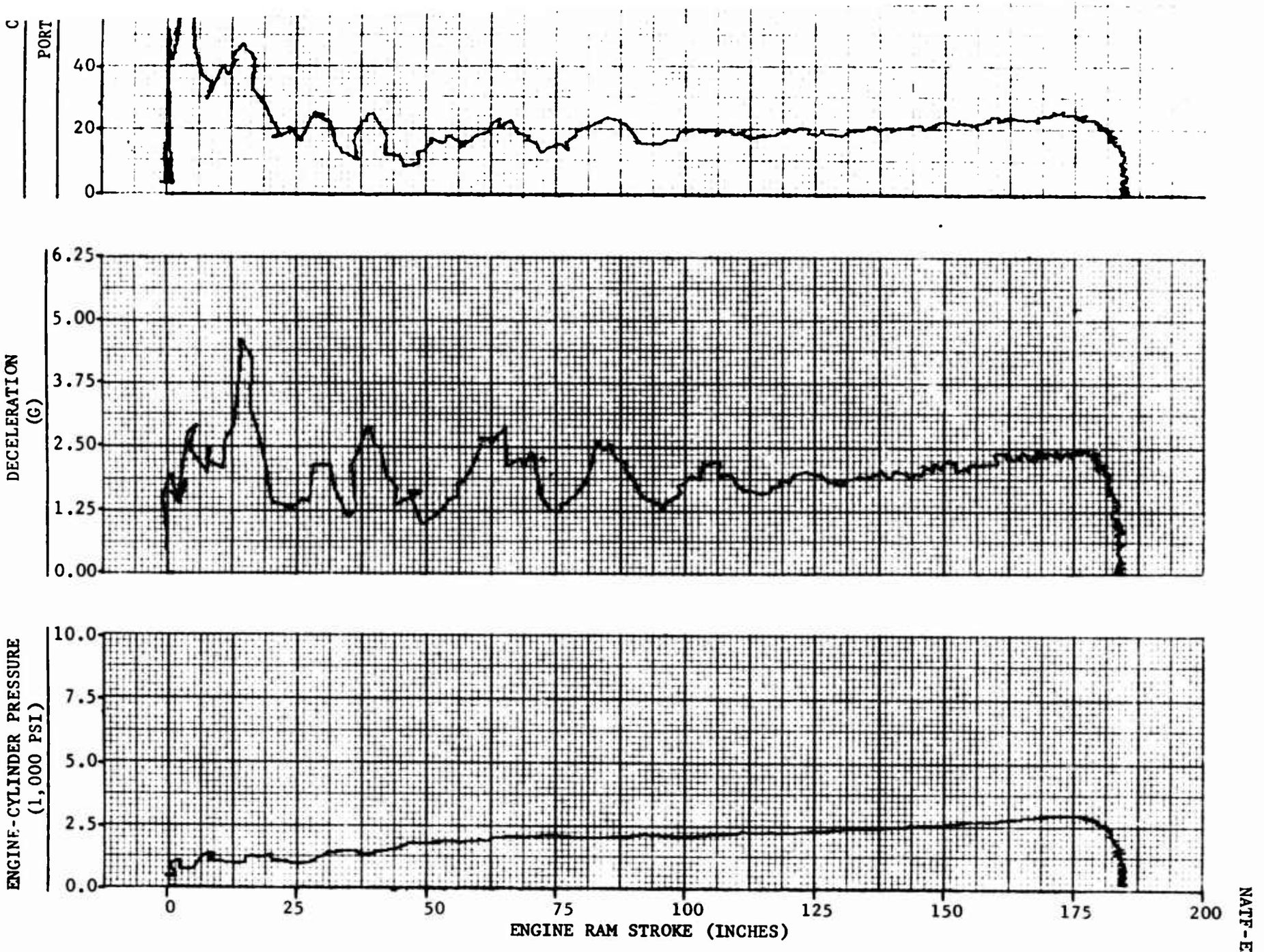


Figure A8 - Continued

ARRESTING-HOOK AXIAL
LOAD (1,000 POUNDS)
160
120
80
40
0

CABLE TENSION (1,000 POUNDS)
PORT
STBD
100
80
60
40
20
0

A

16.25

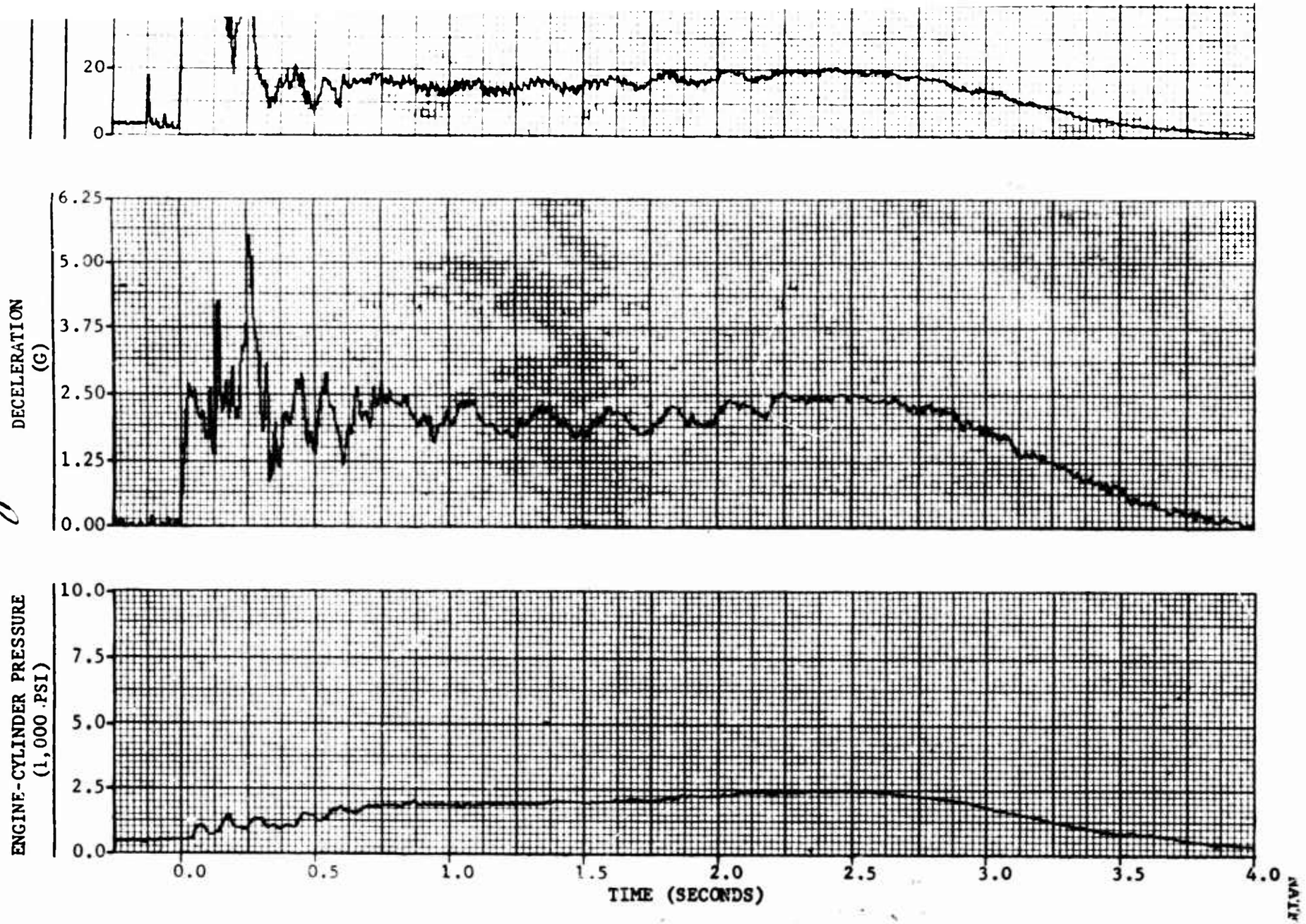
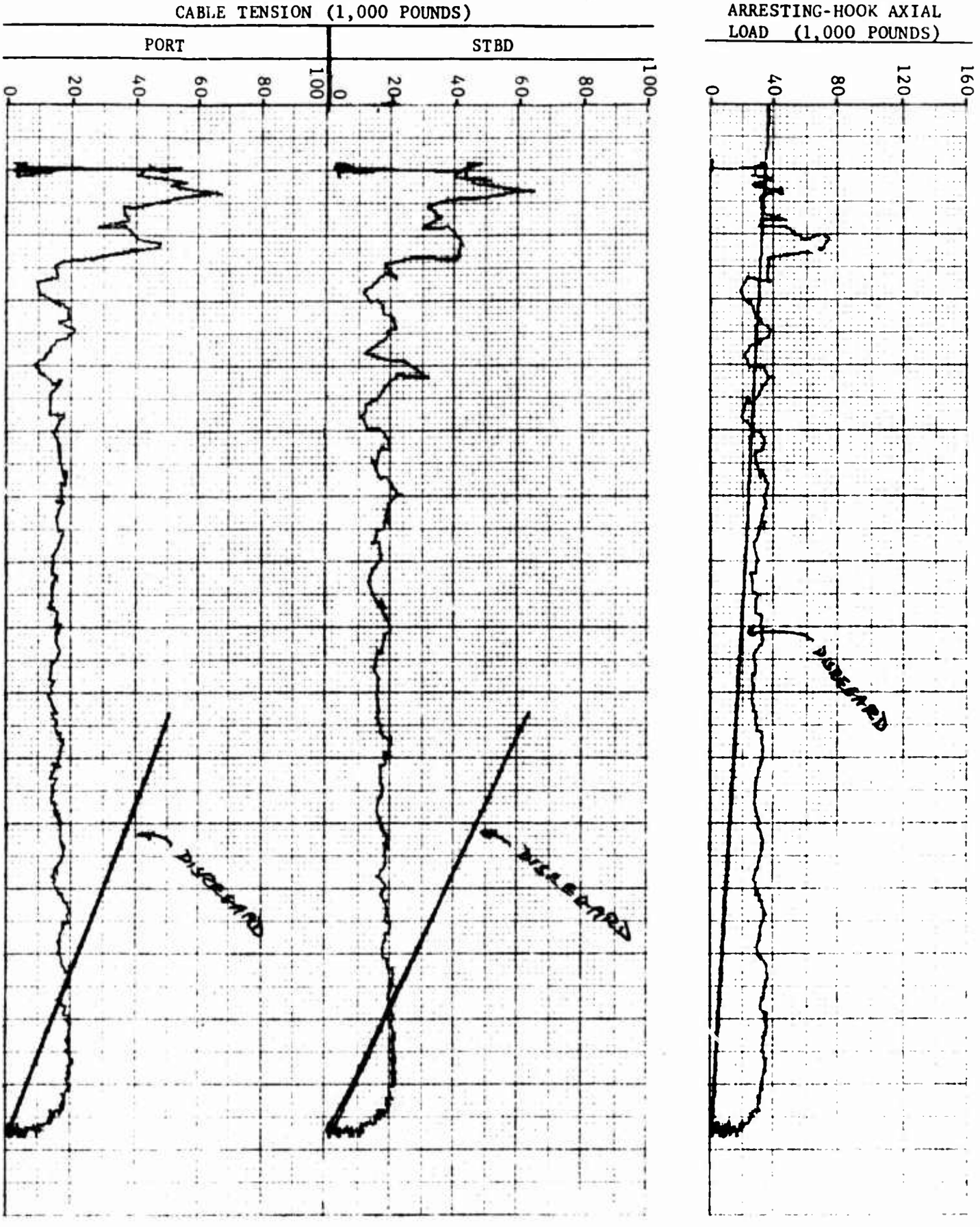


Figure A9 - Time History of Event 22191: ON-CENTER Arrestment of a 12,300-Pound A-4B Aircraft at an Engaging Speed of 122 Knots (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers)


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

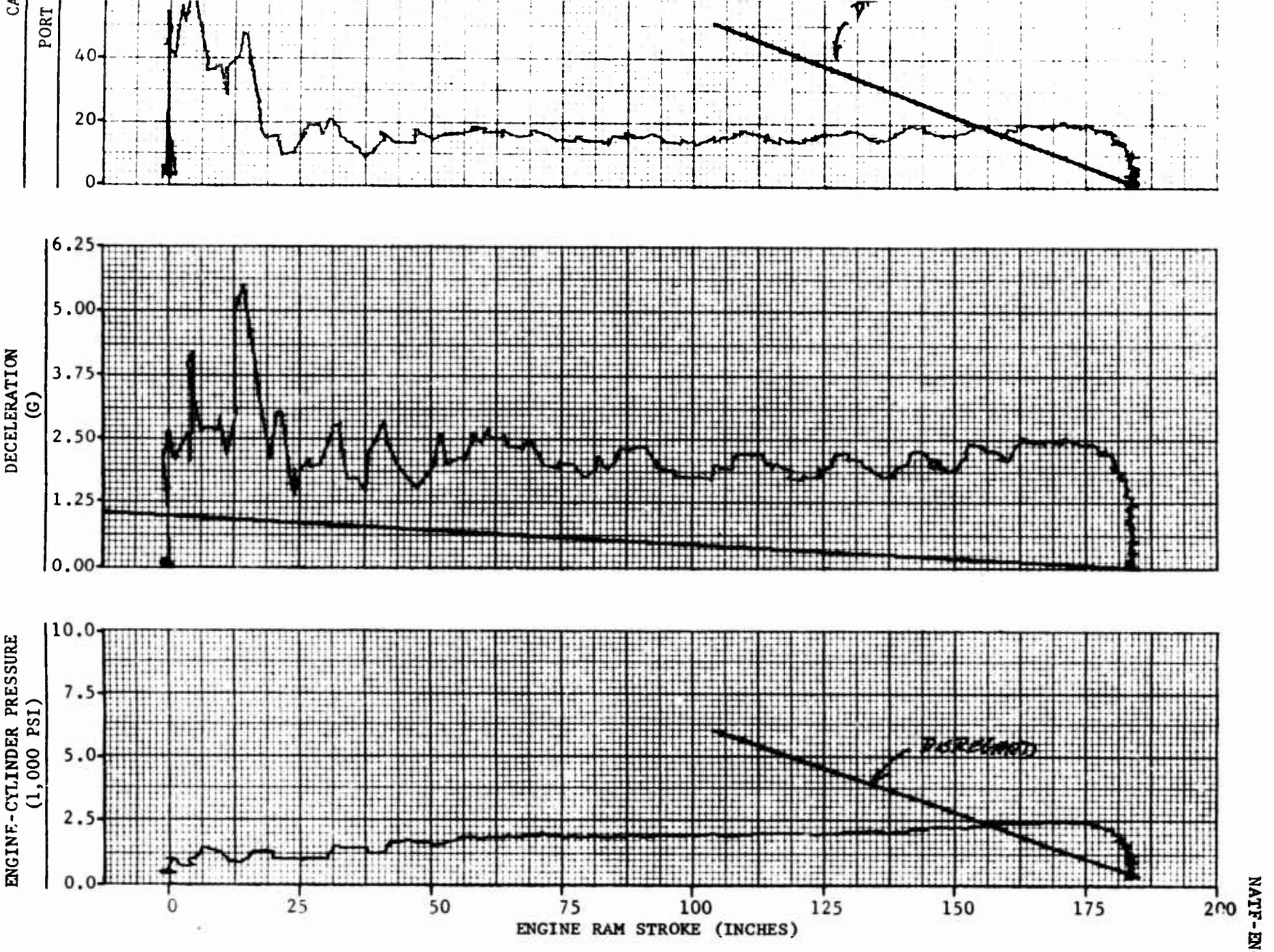


Figure A9 - Continued

CABLE TENSION (1,000 POUNDS)
PORT
STBD
100
80
60
40
20
0
ARRESTING-HOOK
LOAD (1,000 POUNDS)
120
80
40
0

16.25

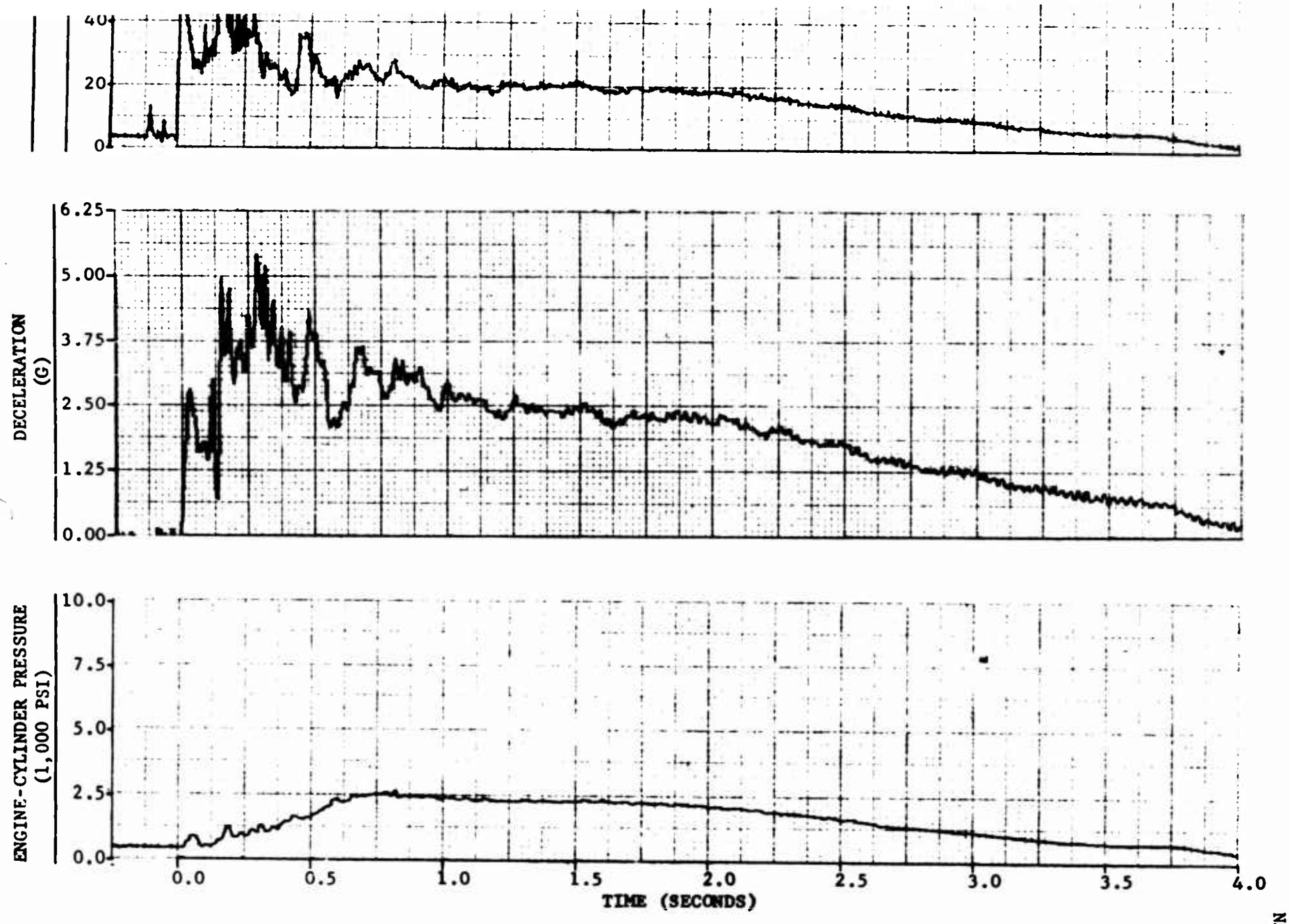
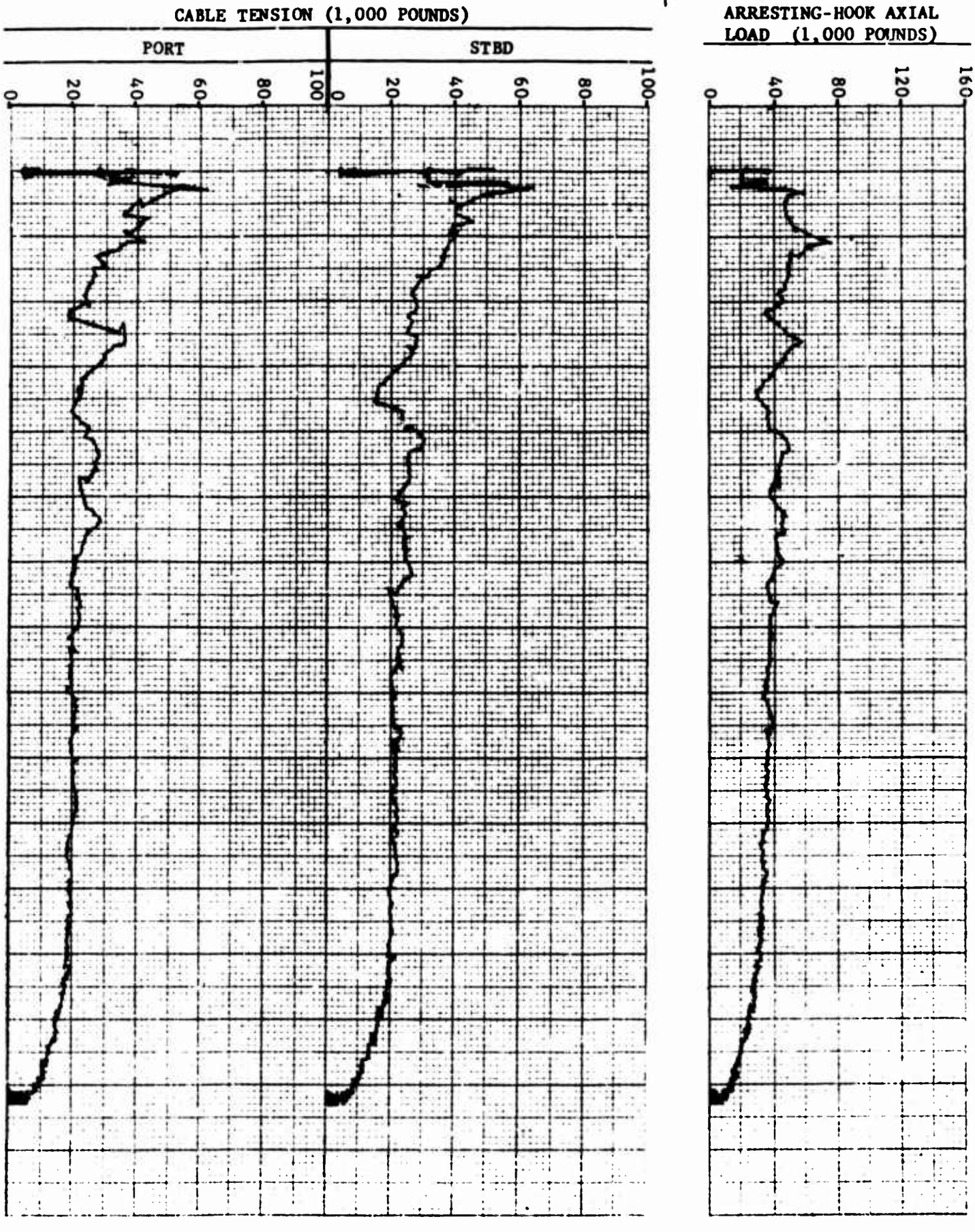


Figure A10 - Time History of Event 21980: ON-CENTER Arrestment of a 12,000-Pound A-4B Aircraft at an Engaging Speed of 138 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using a Single Weight Setting)


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
0
20
40
60
80
100
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

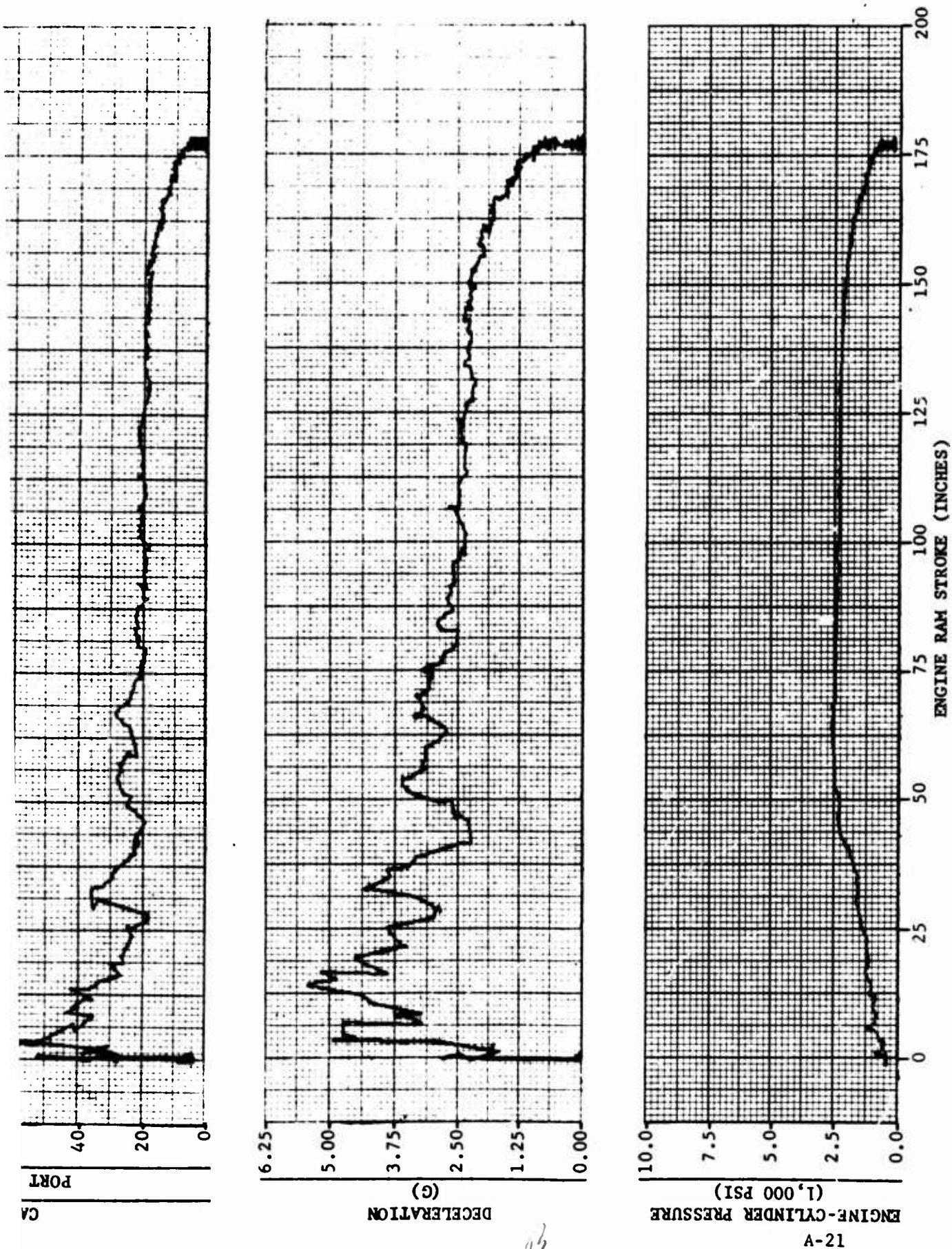
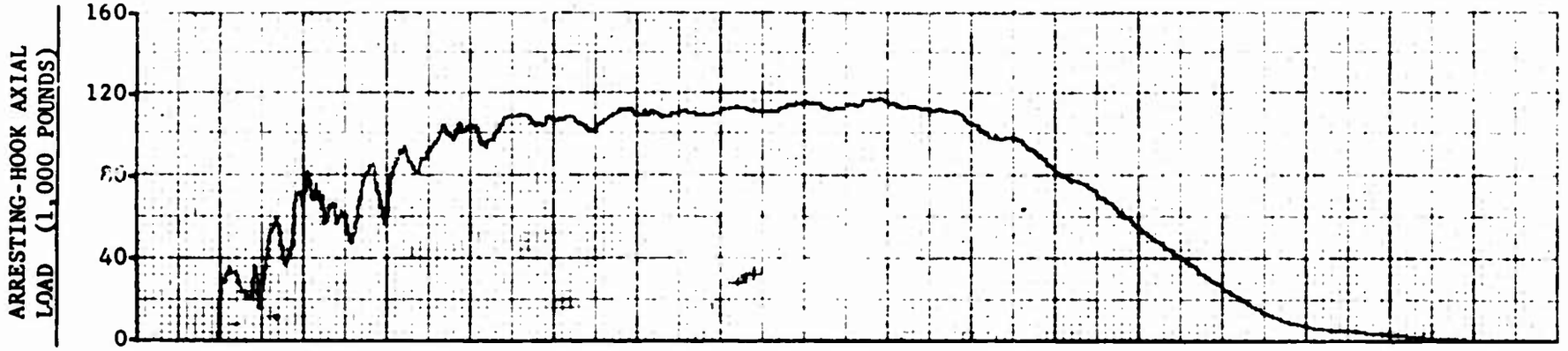
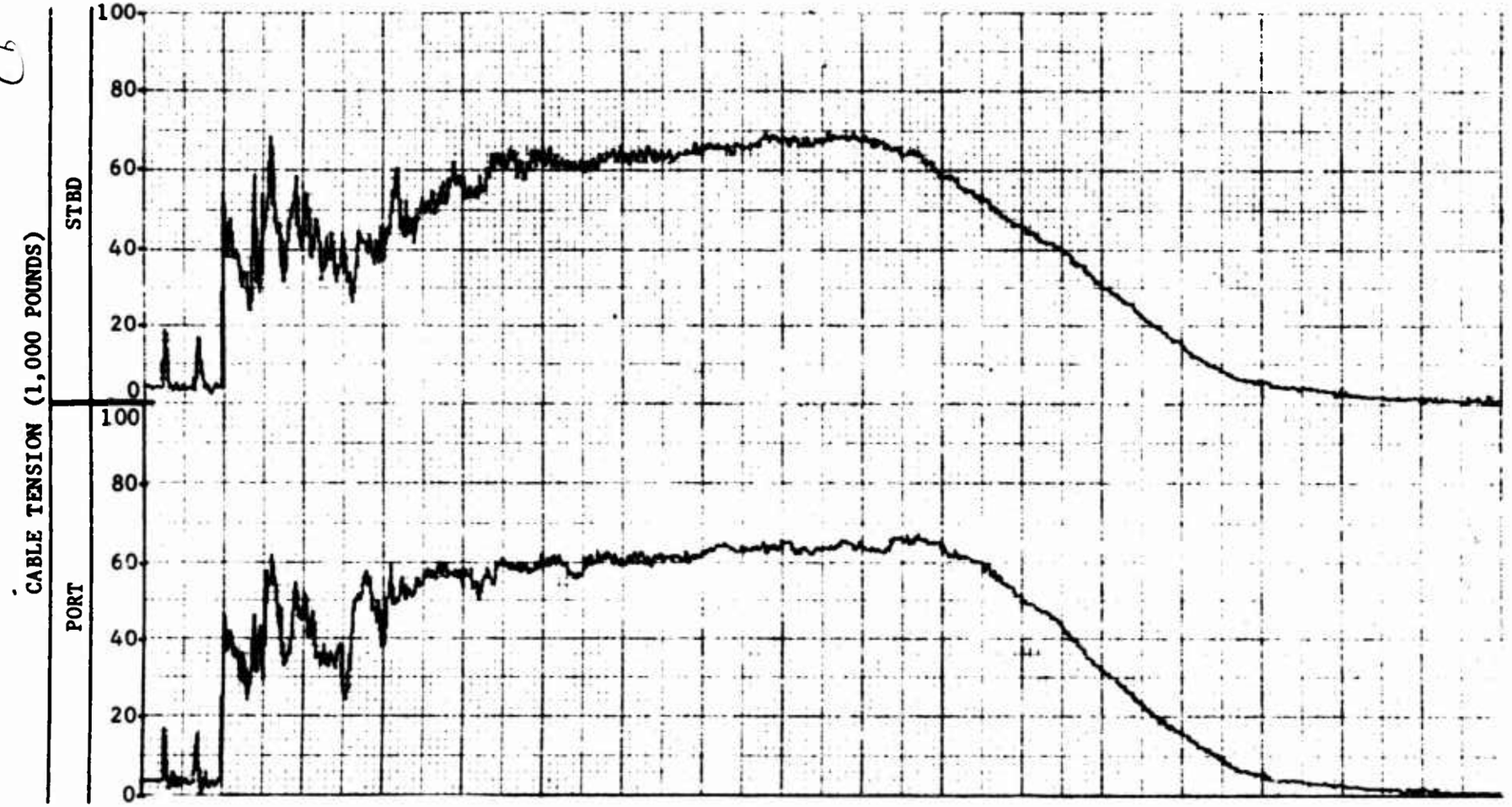


Figure A10 - Continued


ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
160
120
80
40
0


CABLE TENSION (1,000 POUNDS)
STBD
PORT
100
80
60
40
20
0


6.25
5.00

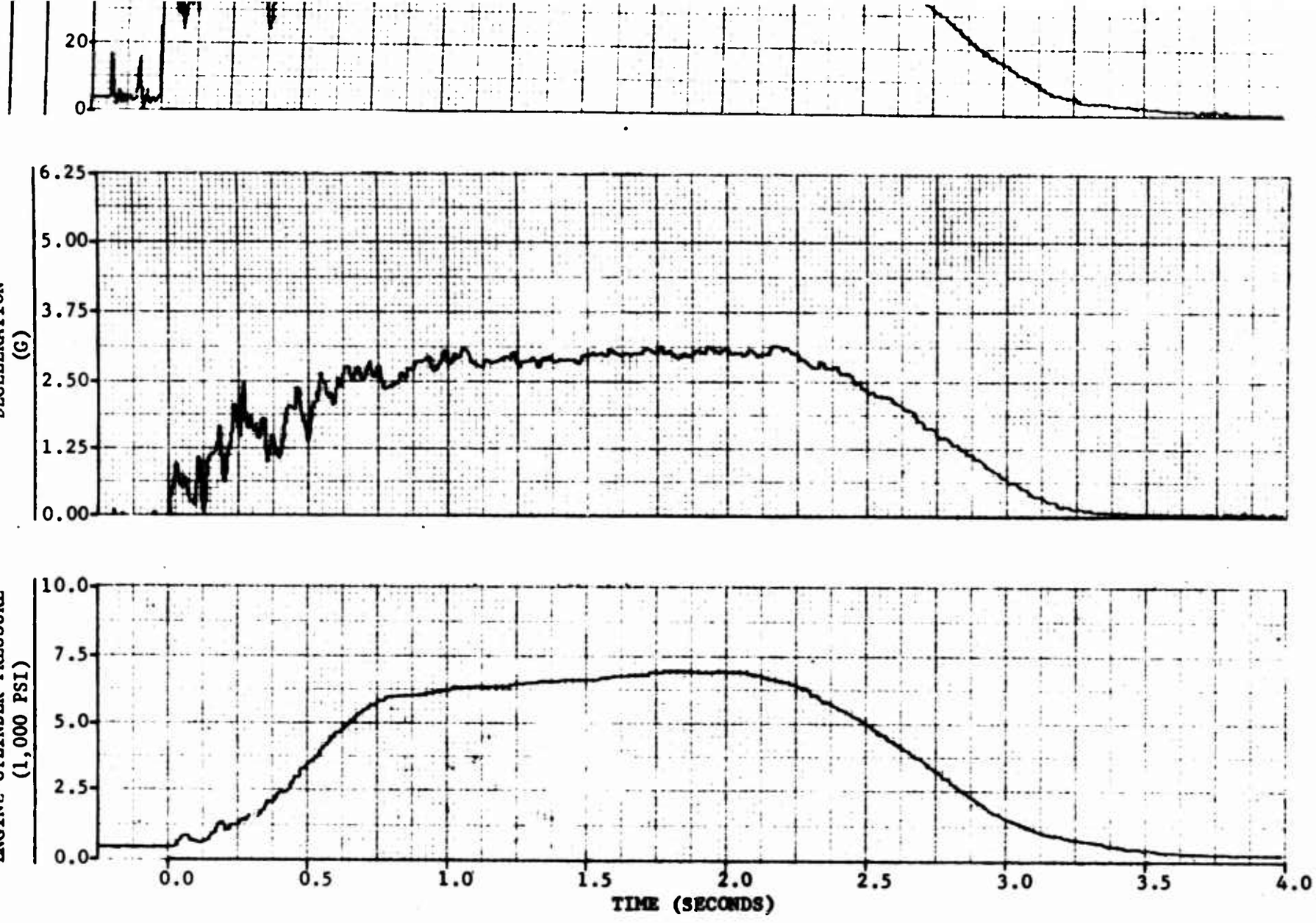
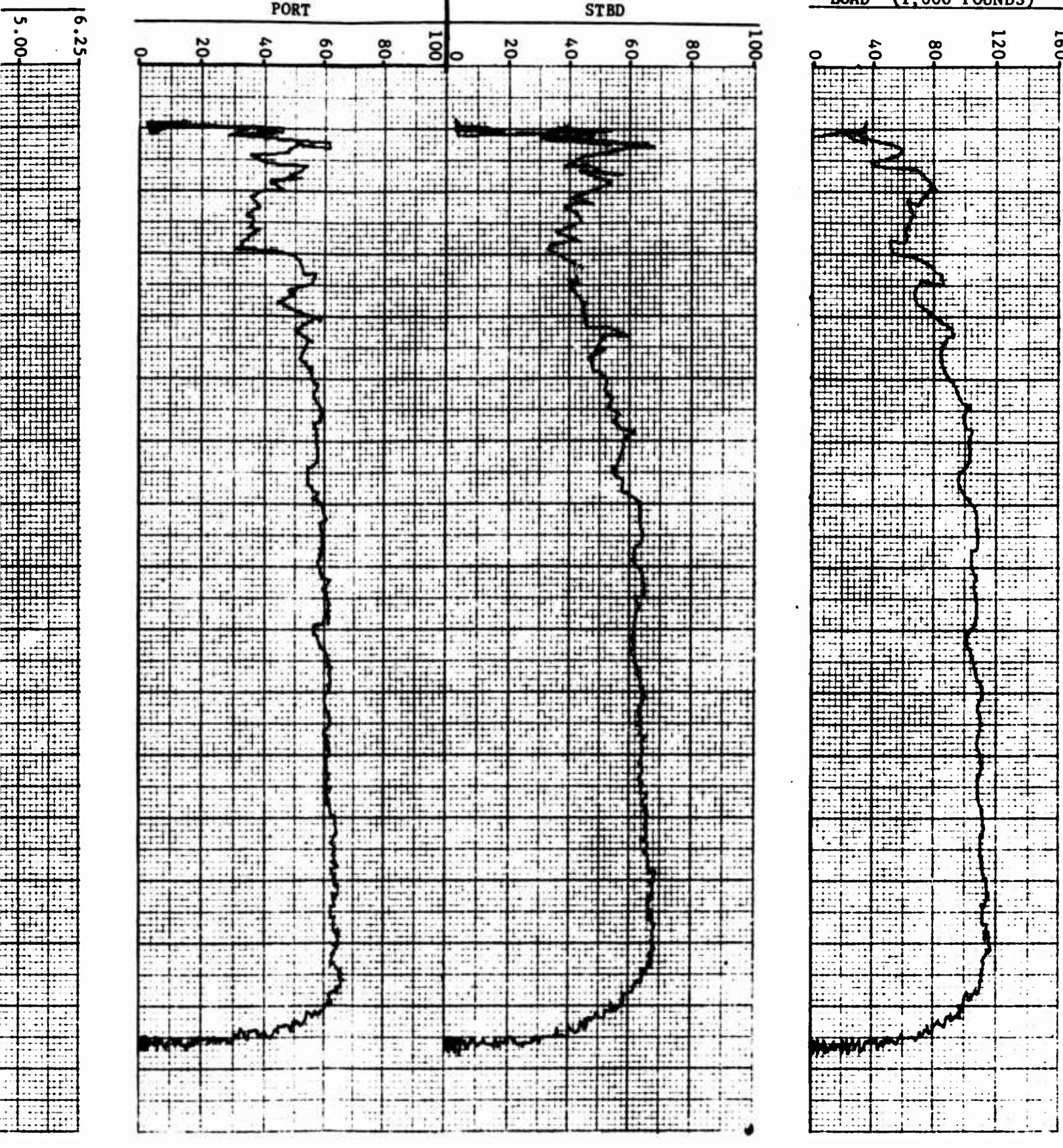


Figure A11 - Time History of Event 21873: ON-CENTER Arrestment of a 32,500-Pound F-4A Aircraft at an Engaging Speed of 134 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers)


5.00
6.25
CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
0
20
40
60
80
100
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120

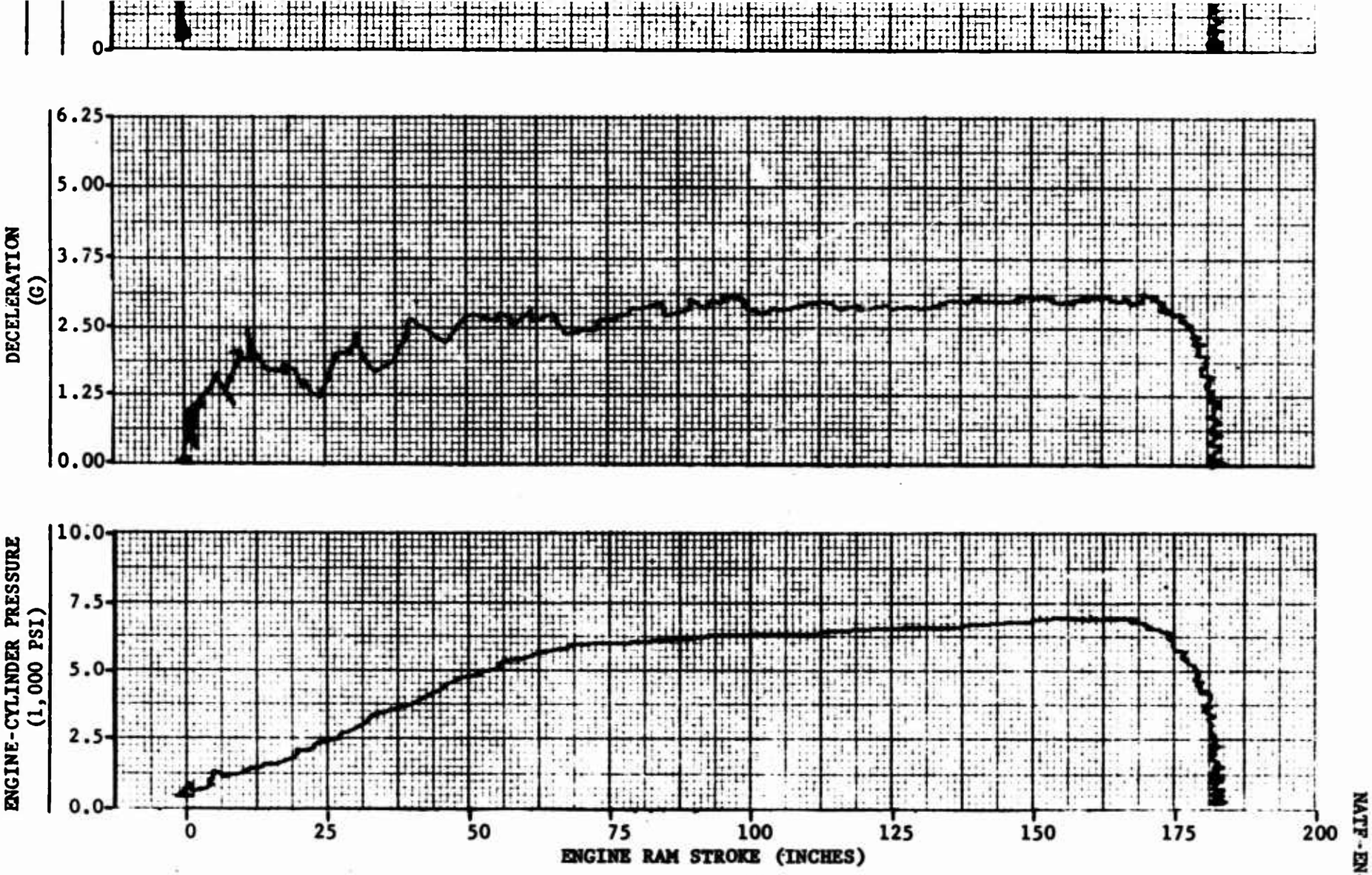


Figure A11 - Continued

ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
6.25
5.00

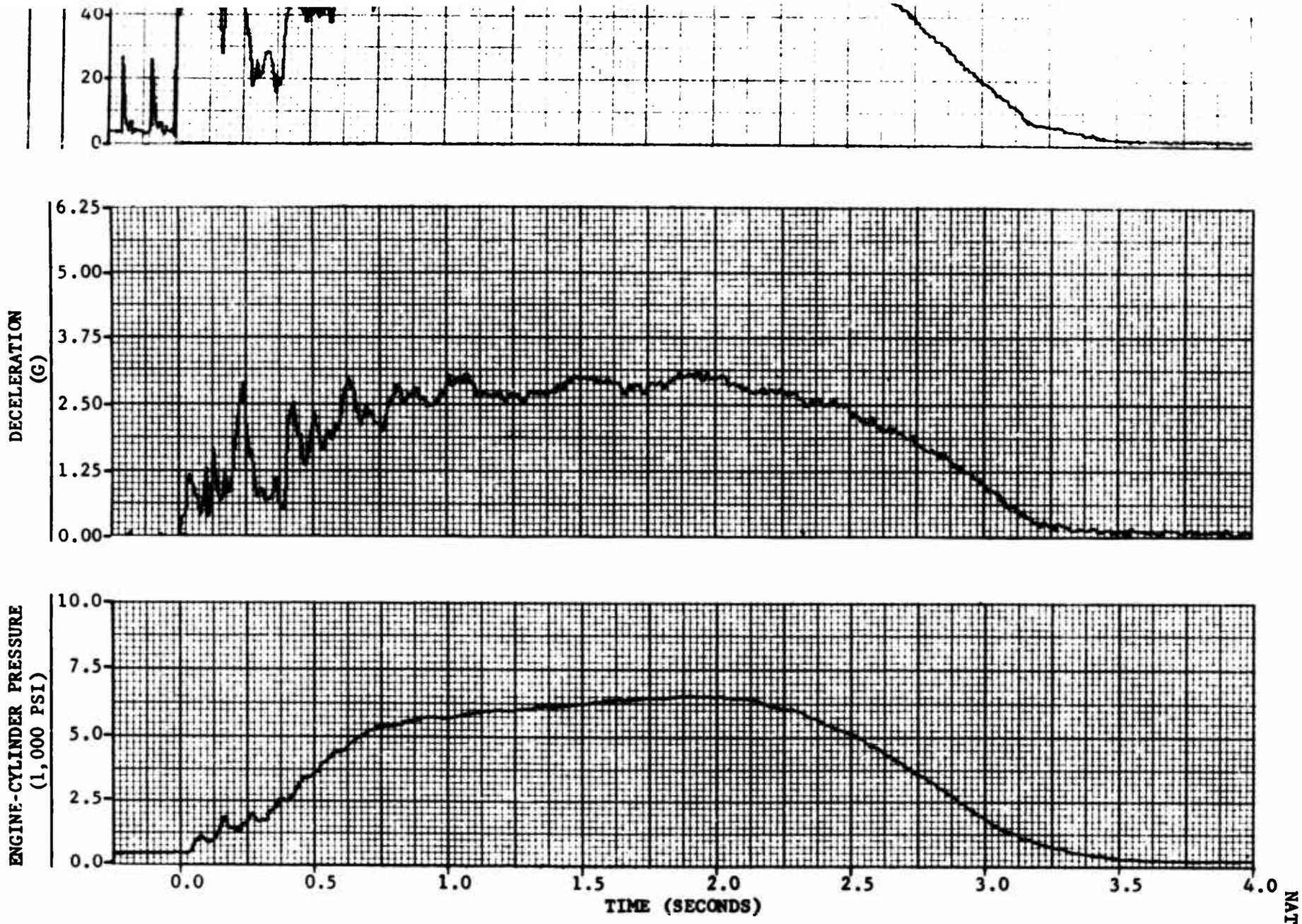
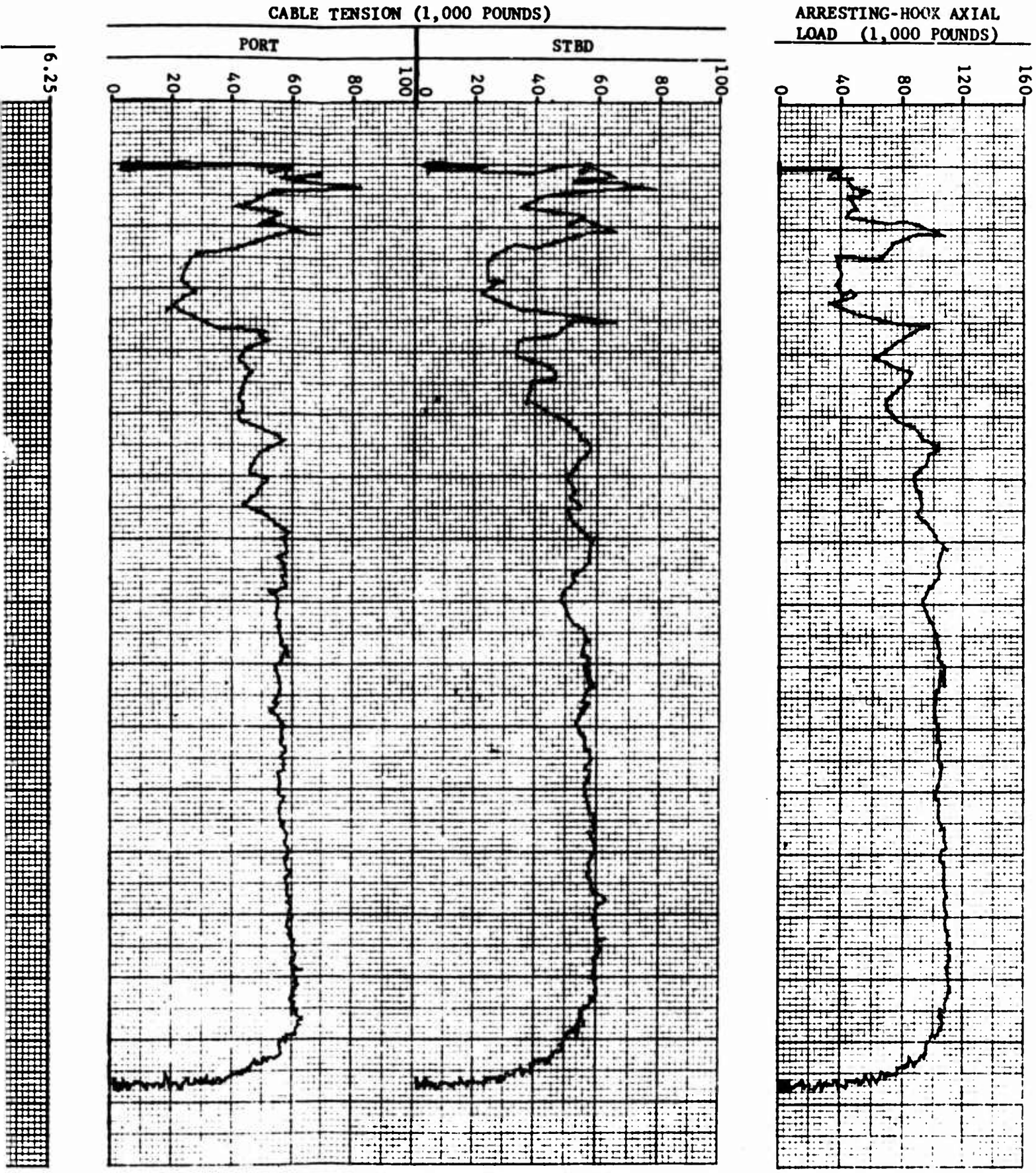


Figure A12 - Time History of Event 22183: ON-CENTER Arrestment of a 32,800-Pound F-4A Aircraft at an Engaging Speed of 127 Knots (Mark 7 Mod 3 Arresting Gear Configured Without Sheave Dampers)

4


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
0
20
40
60
80
100
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

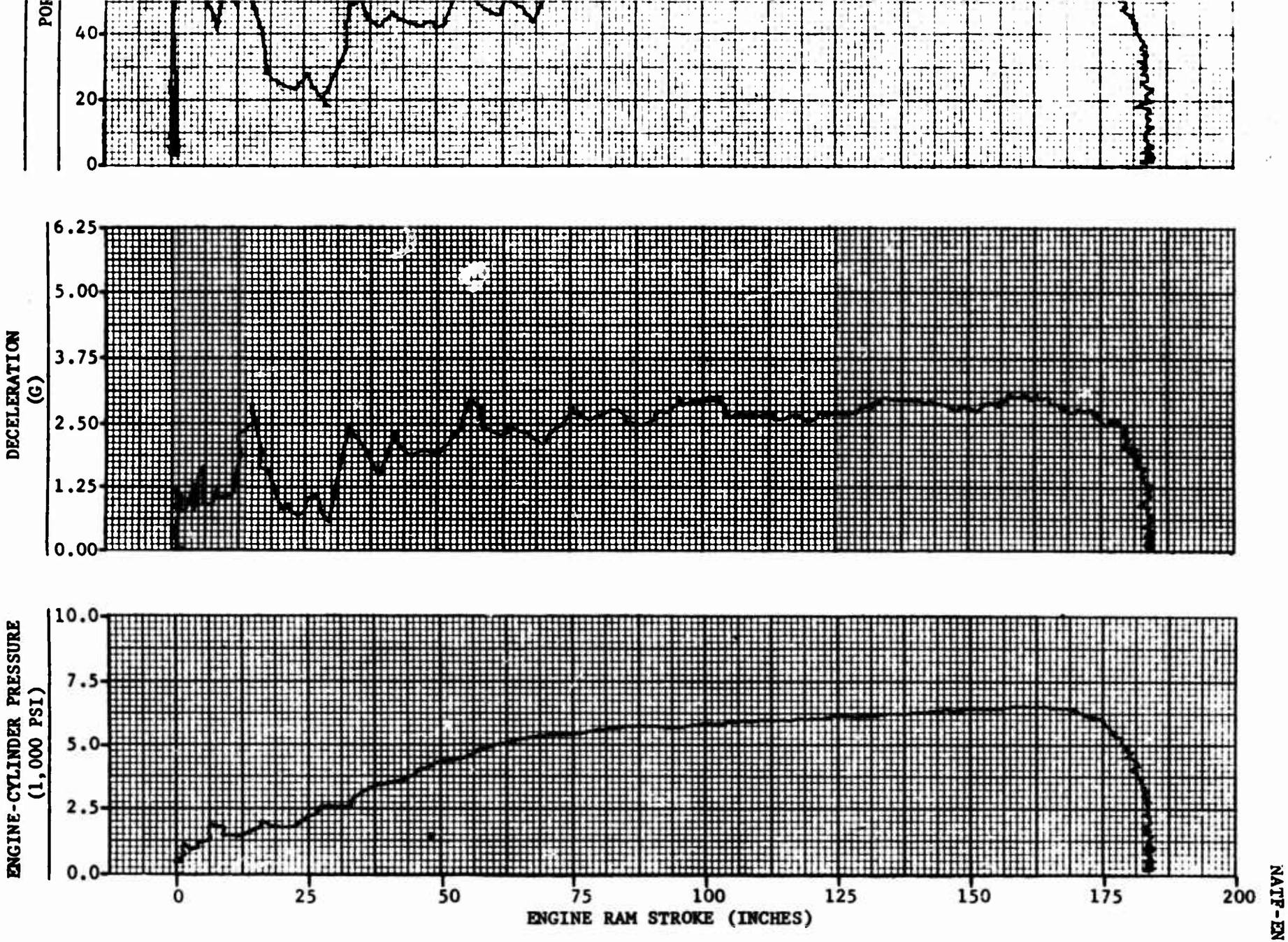
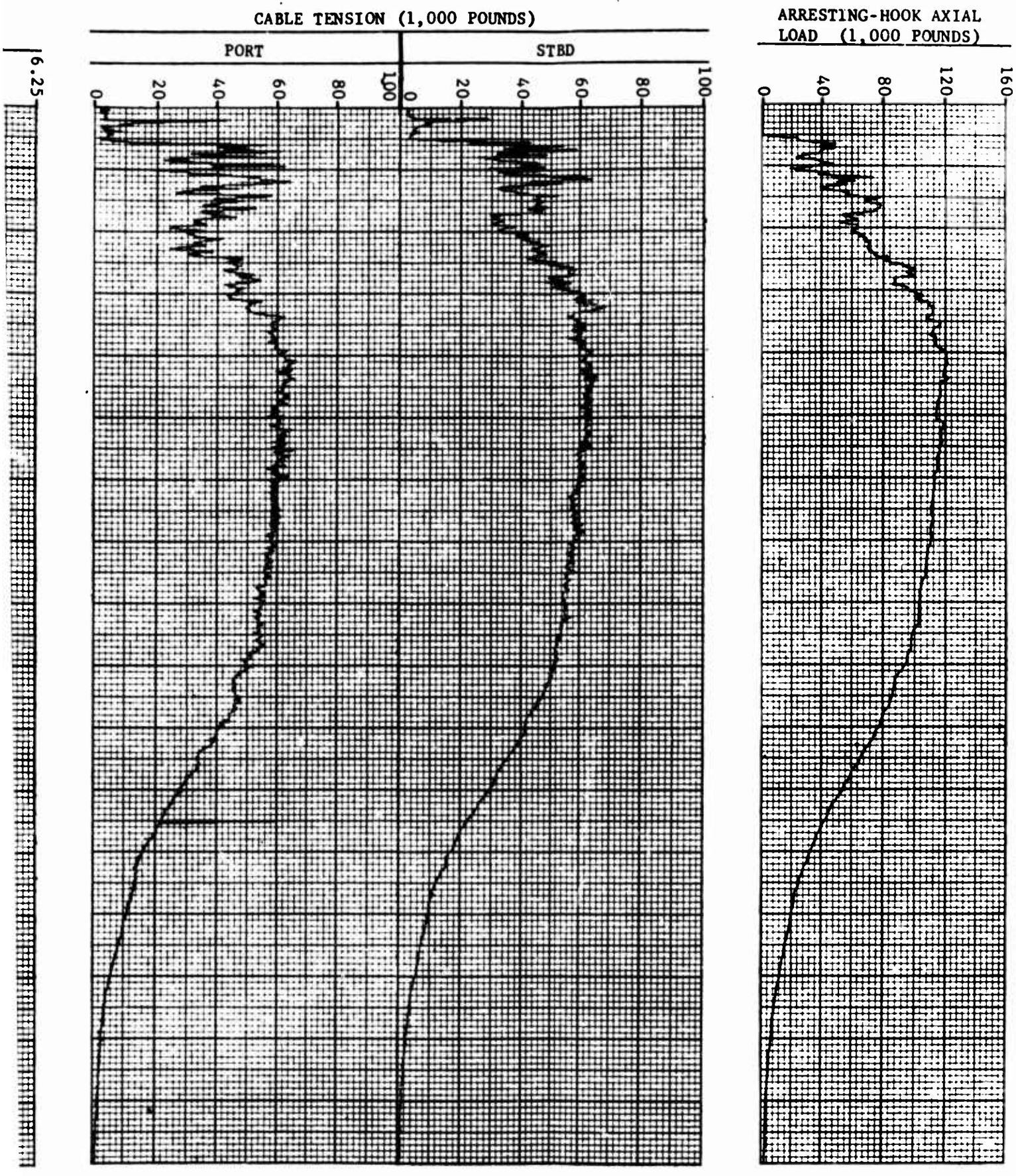


Figure A12 - Continued

41


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160
6.25

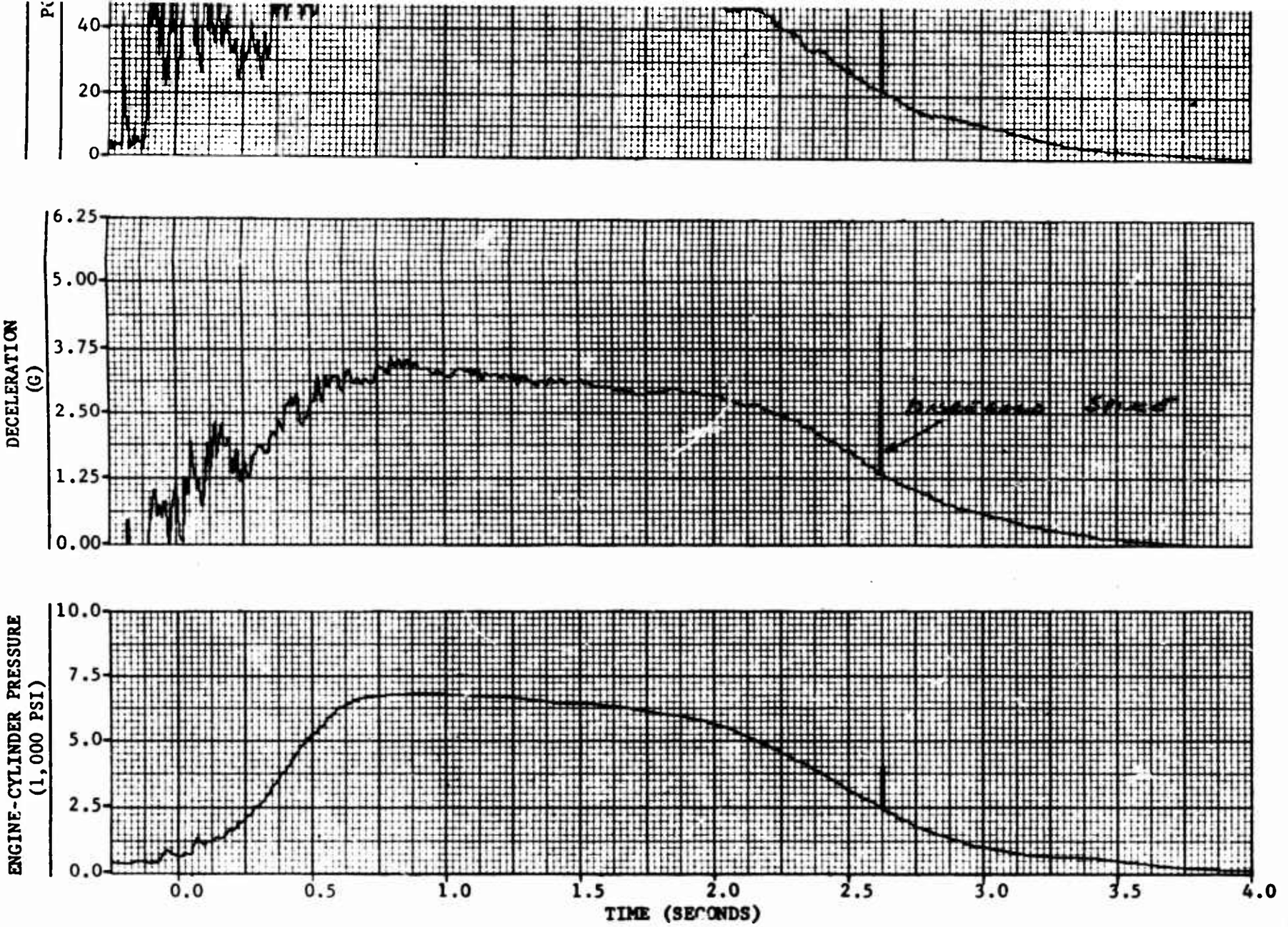
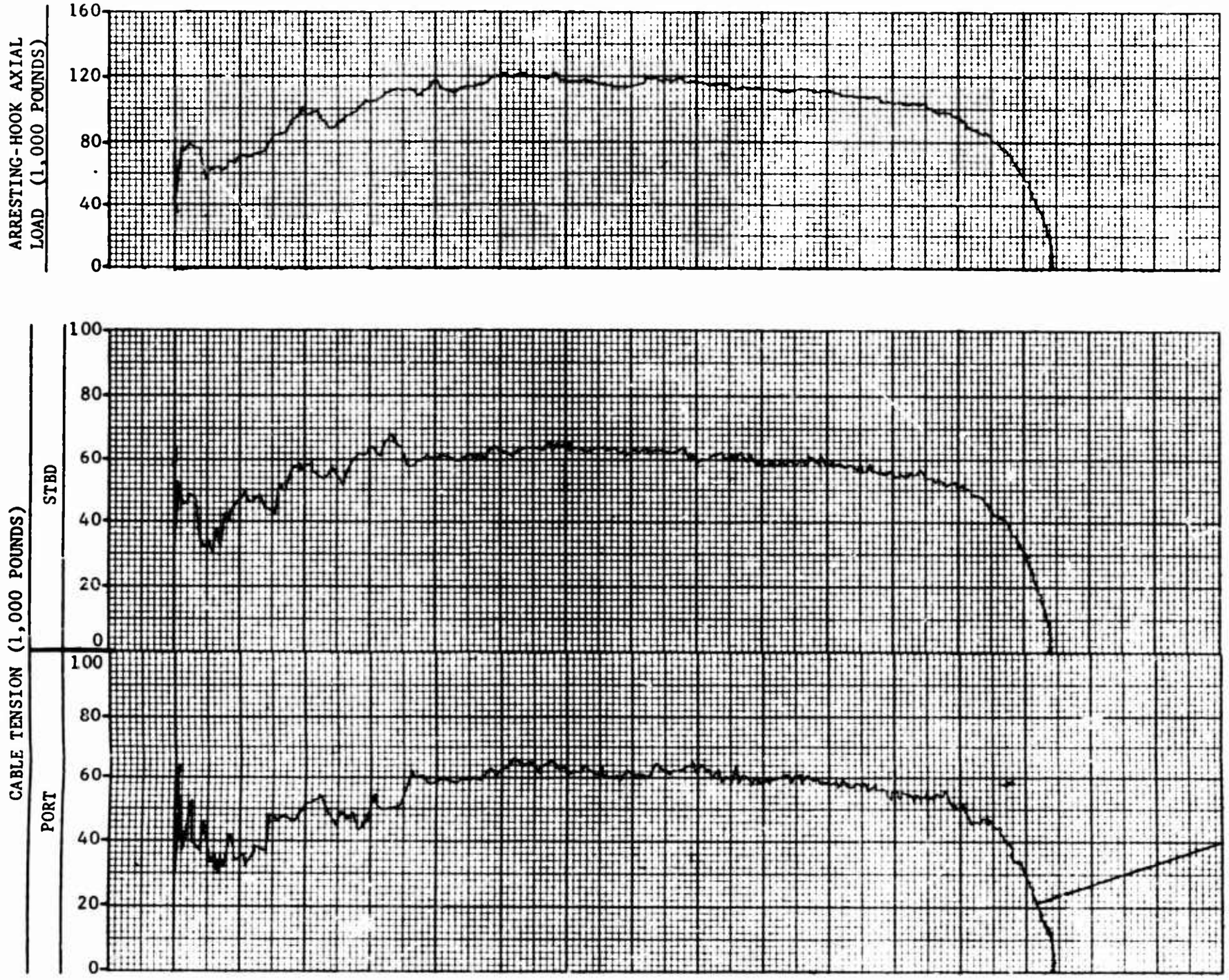


Figure A13 - Time History of Event 23558: ON-CENTER Arrestment of a 30,800-Pound F-4A Aircraft at an Engaging Speed of 132 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using a Single Weight Setting)


ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
160
120
80
40
0
CABLE TENSION (1,000 POUNDS)
STBD
PORT
100
80
60
40
20
0
6.25
5.00

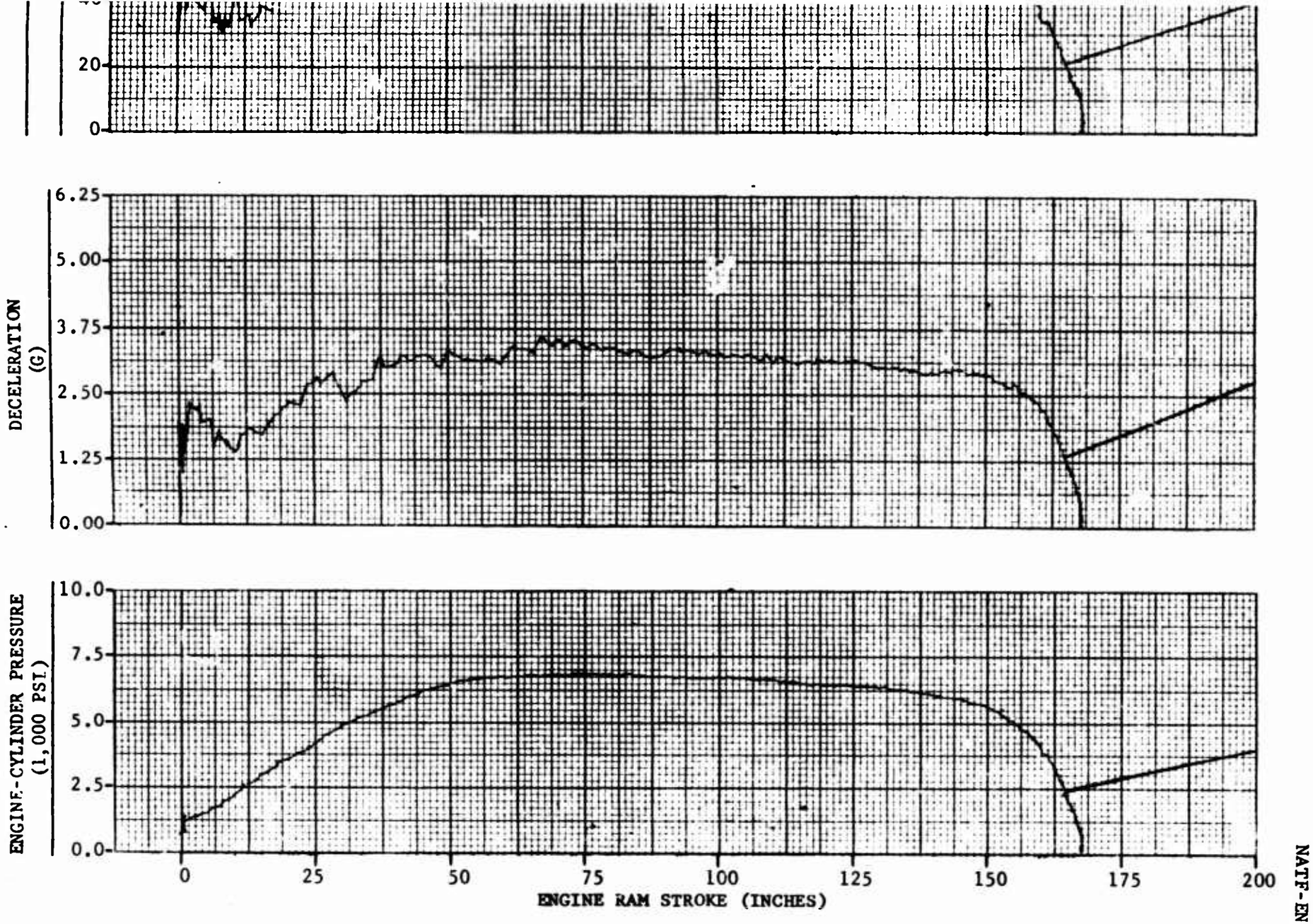
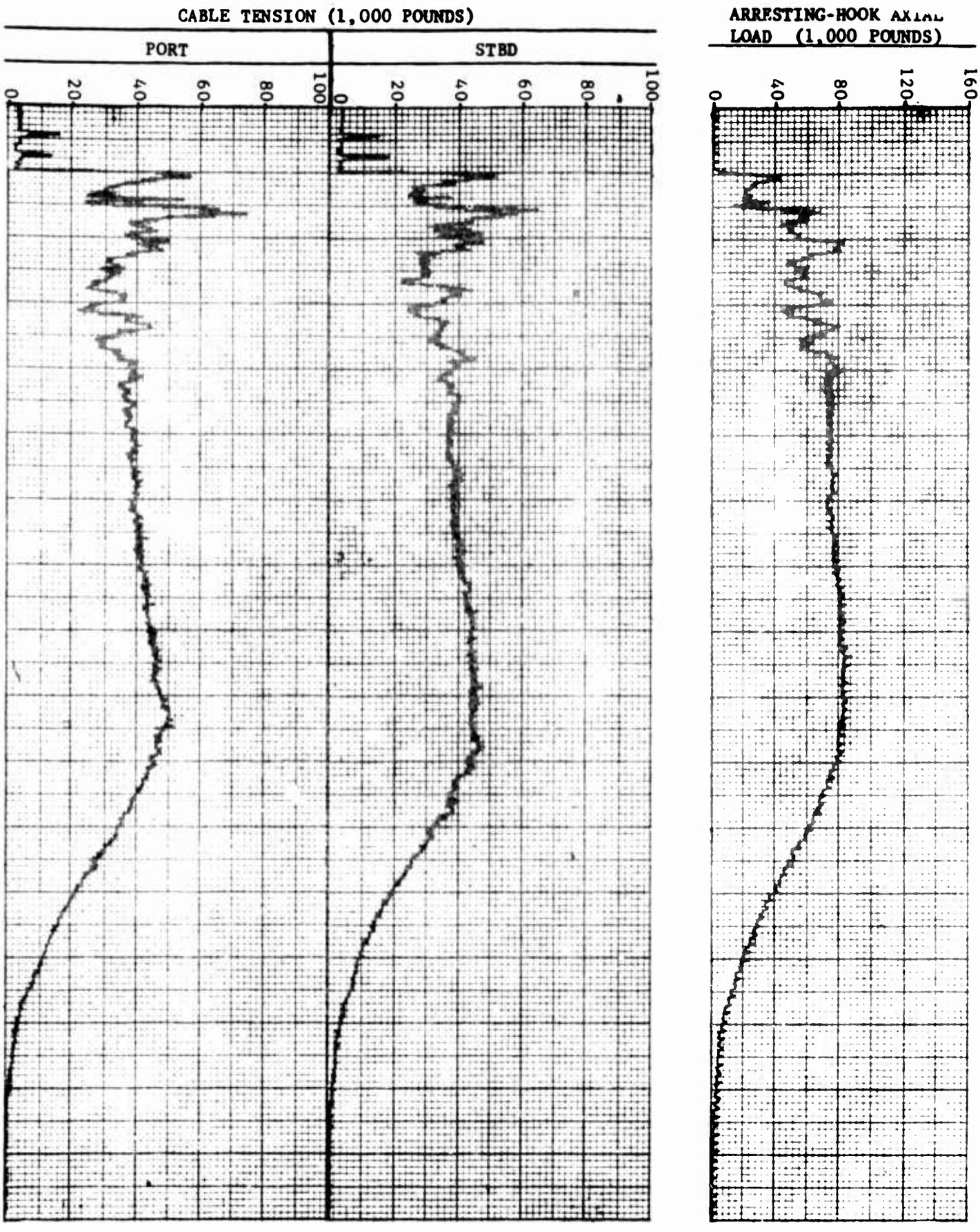


Figure A13 - Continued)


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

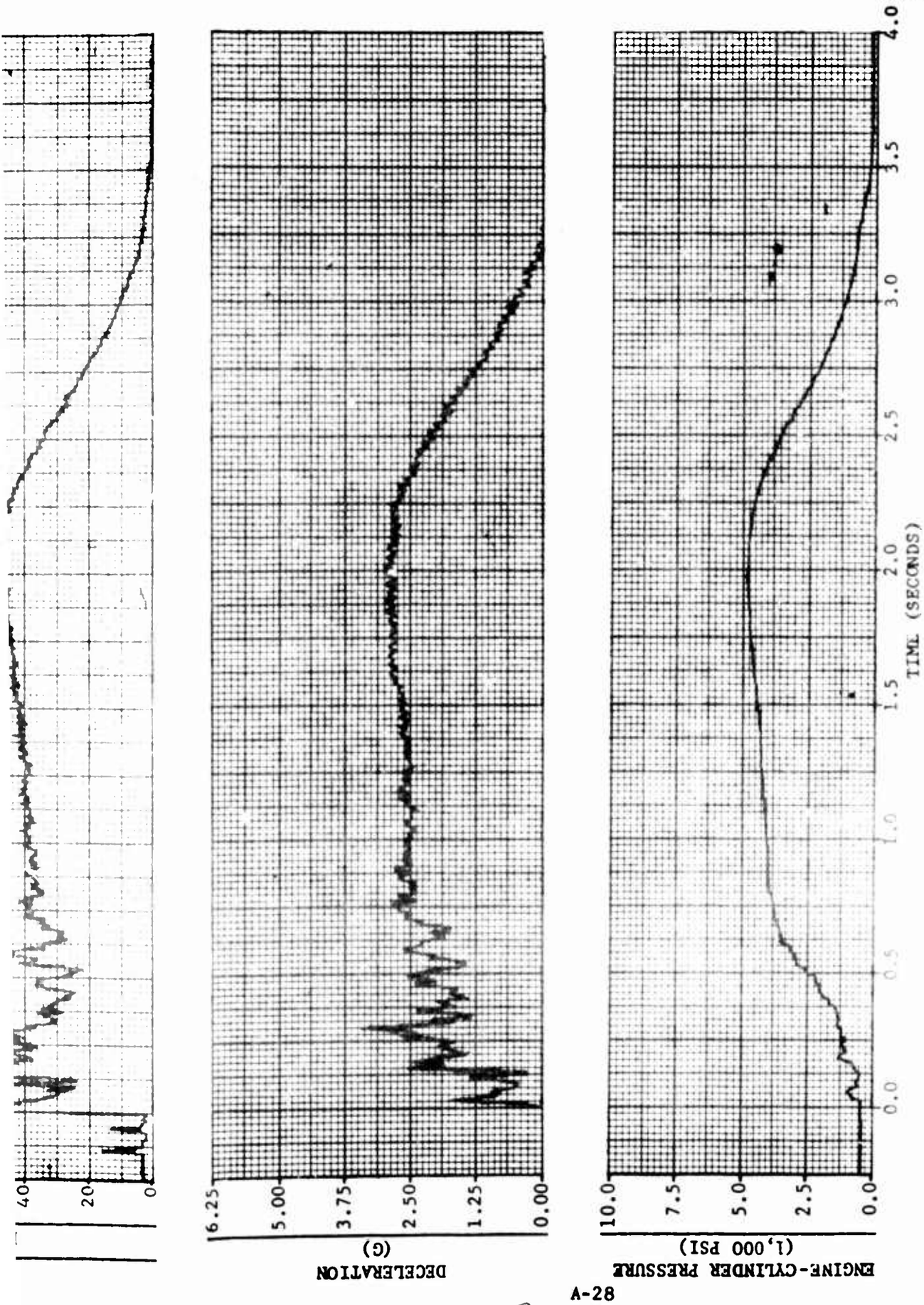
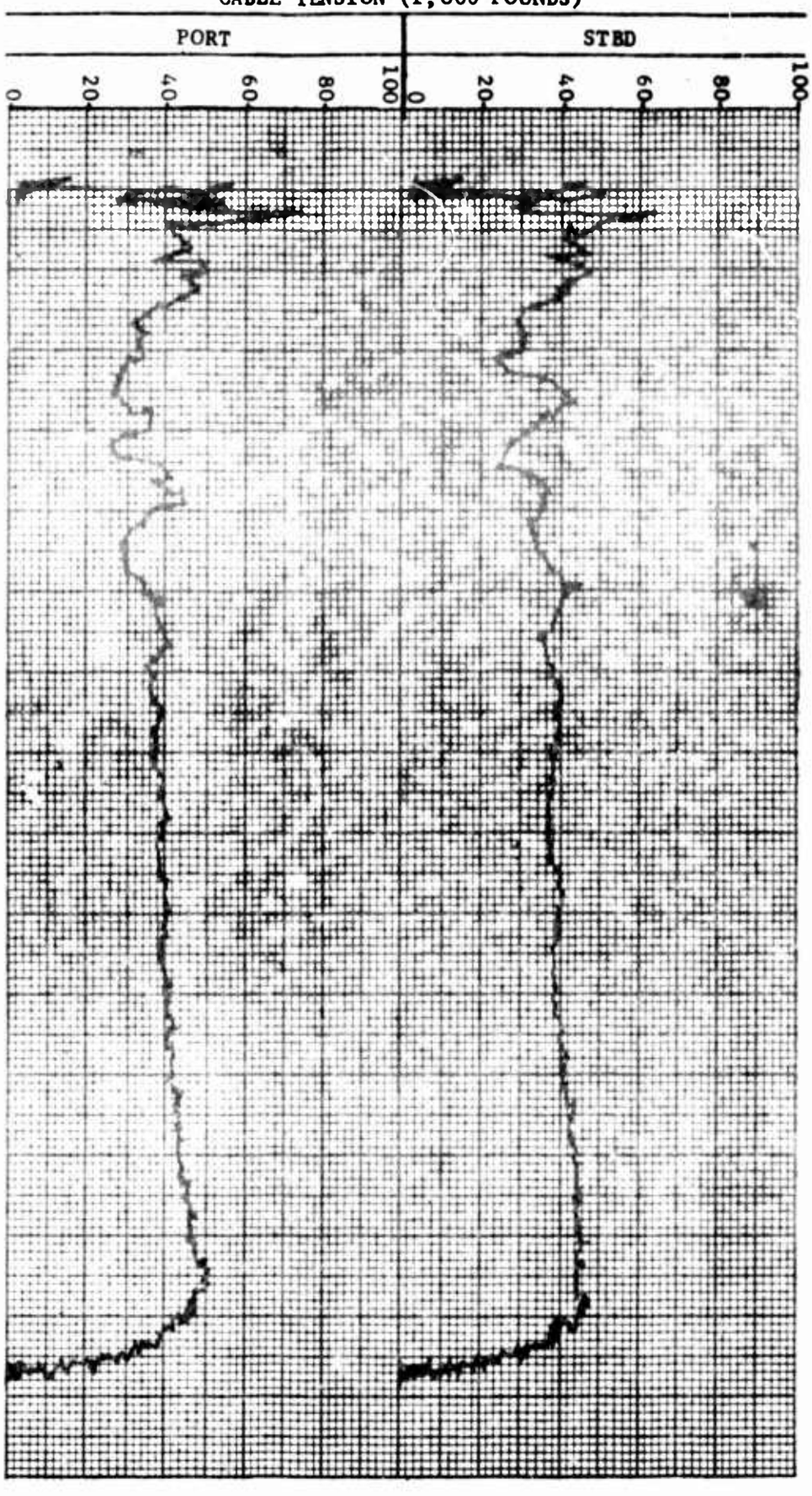
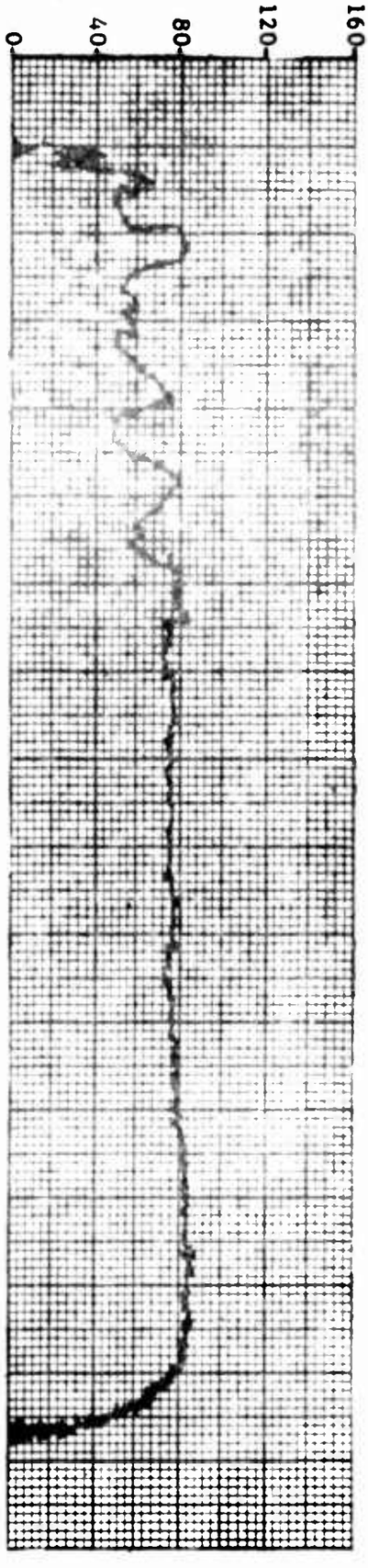


Figure A14 - Time History of Event 21665: ON-CENTER Arrestment of a 22,000-Pound Aircraft at an Engaging Speed of 139 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers)

13


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
0
20
40
60
80
100


ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

6.25

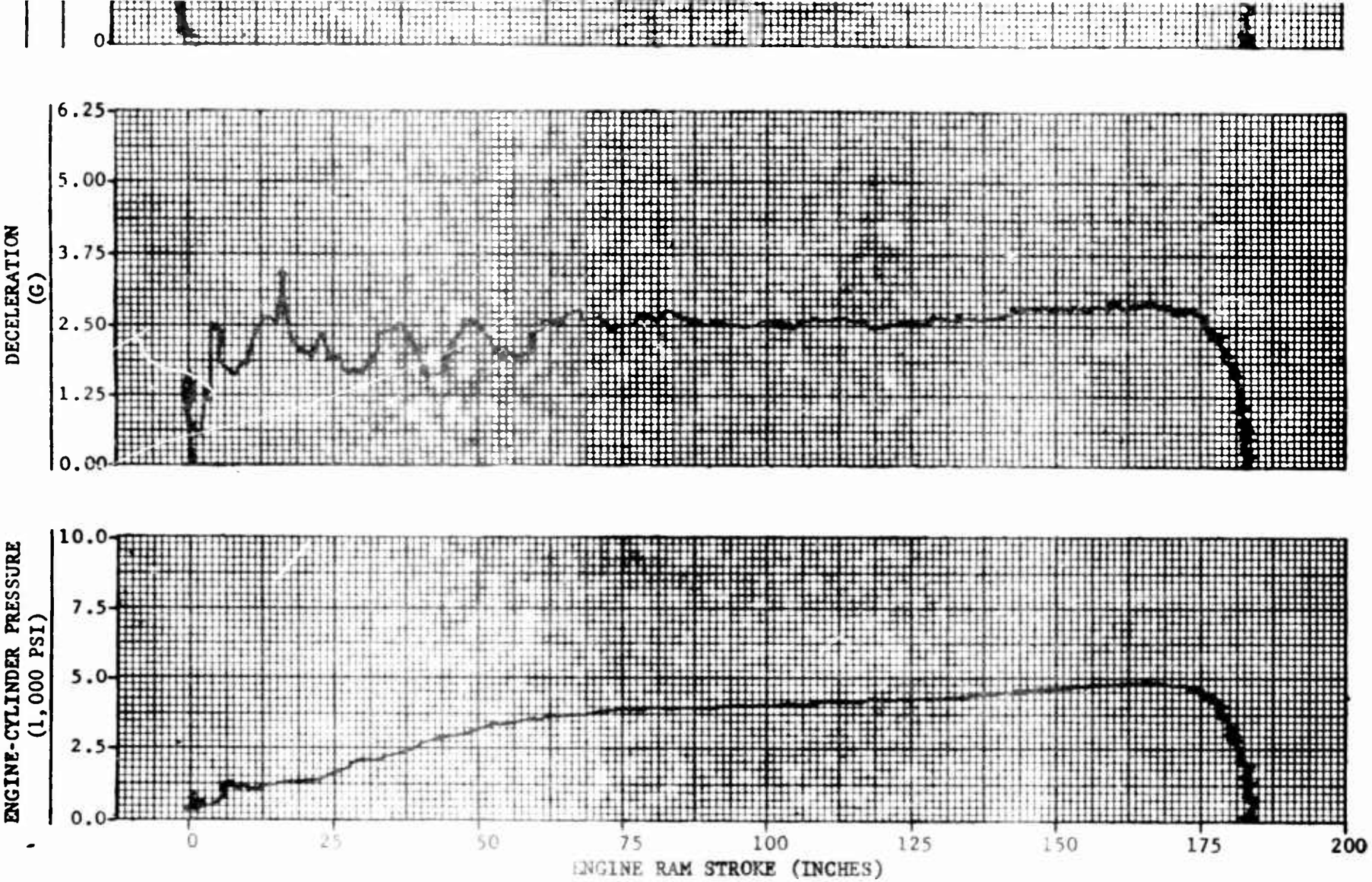
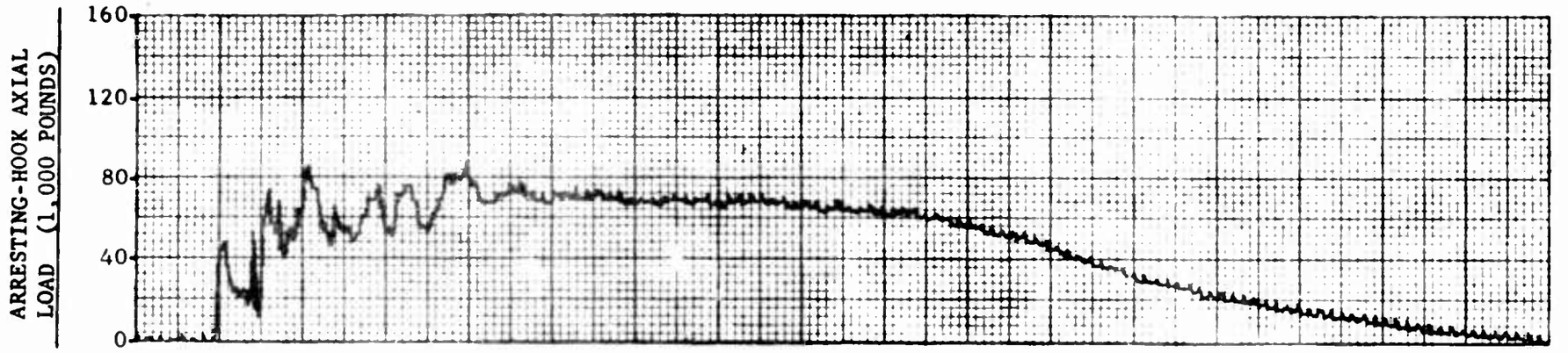
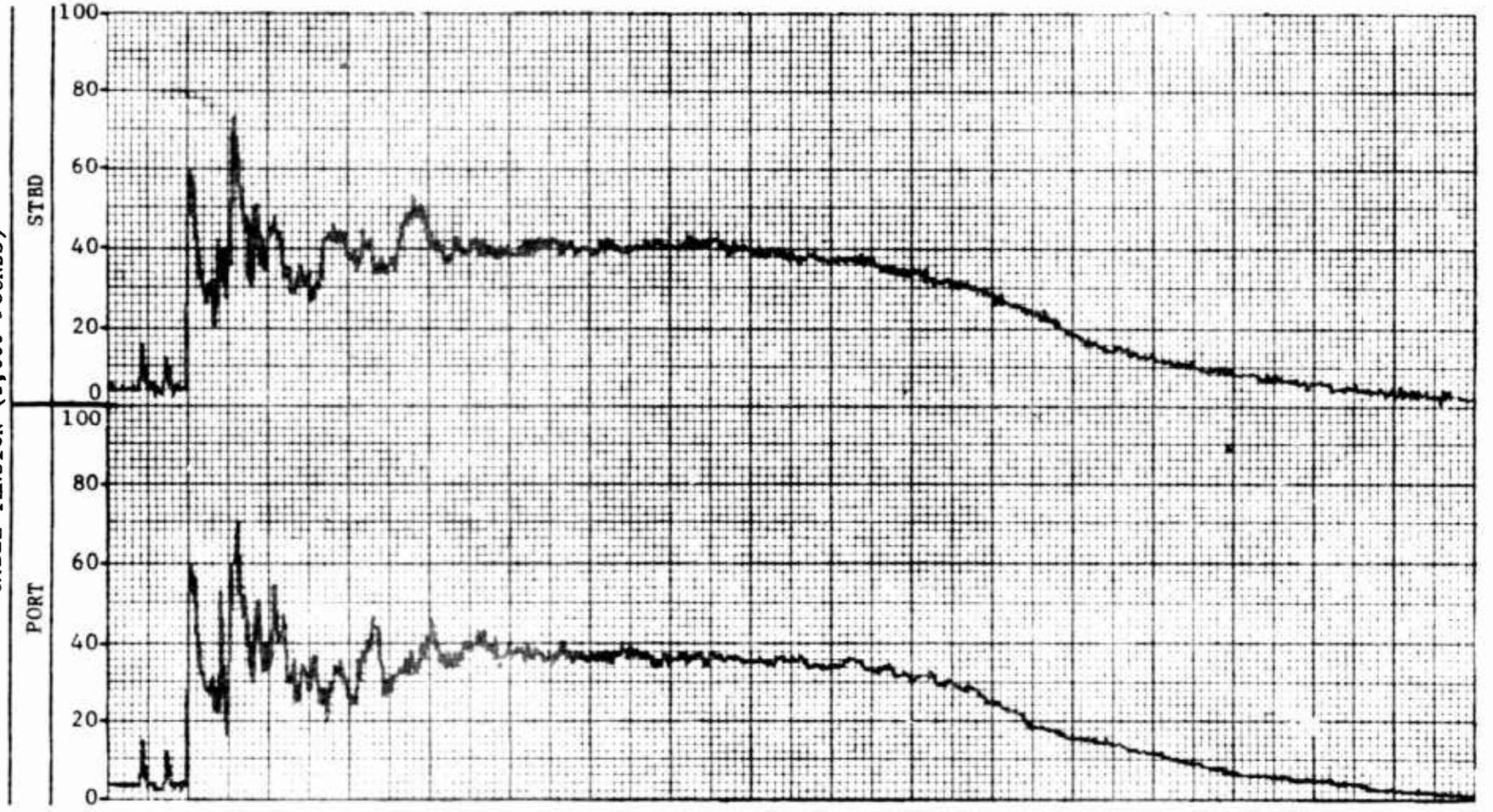
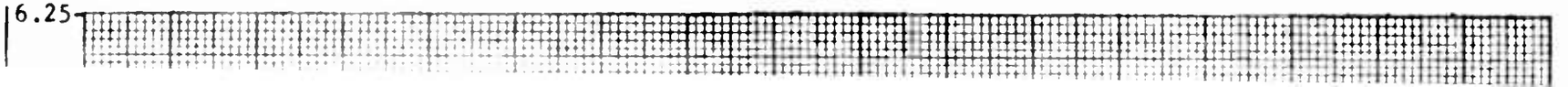


Figure A14 - Continued


ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
160
120
80
40
0


CABLE TENSION (1,000 POUNDS)
STBD
PORT
100
80
60
40
20
0


6.25

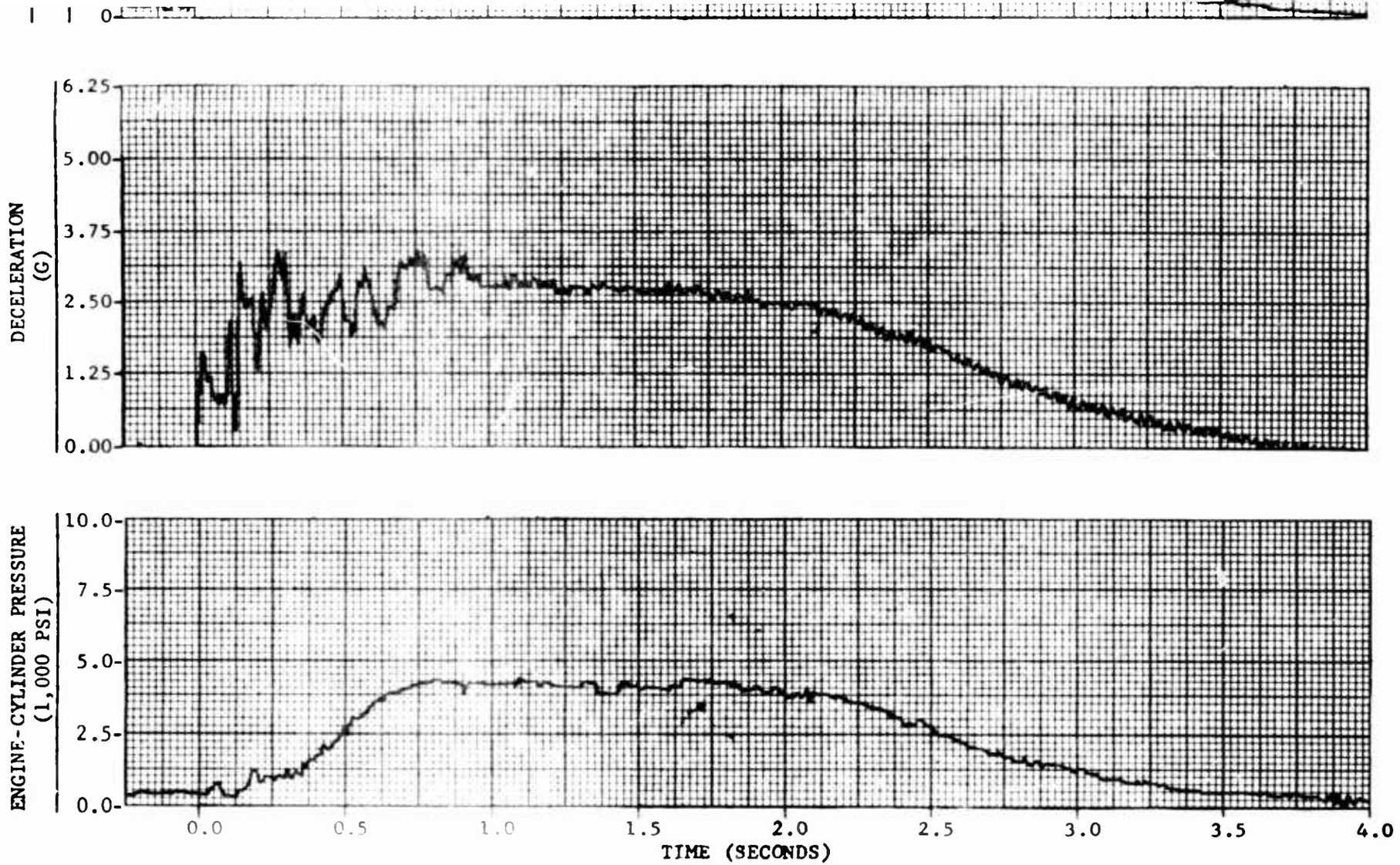
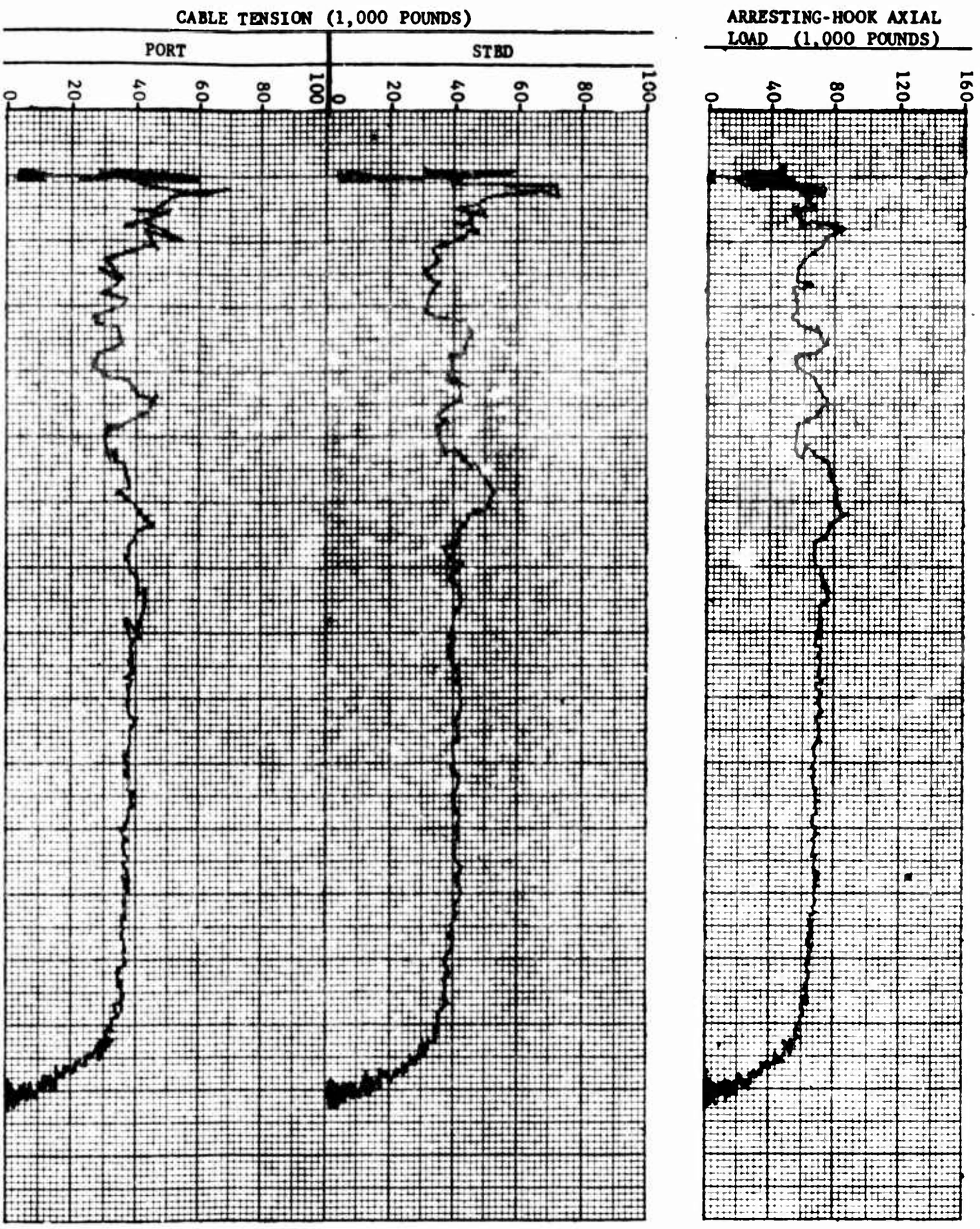


Figure A15 - Time History of Event 22045: ON-CENTER Arrestment of a 21,000-Pound F-8D Aircraft at an Engaging Speed of 143 Knots (Mark 7 Mod 3 Arresting Gear Configured With Sheave Dampers, Using a Single Weight Setting)


CABLE TENSION (1,000 POUNDS)
PORT
STBD
0
20
40
60
80
100
0
20
40
60
80
100

ARRESTING-HOOK AXIAL LOAD (1,000 POUNDS)
0
40
80
120
160

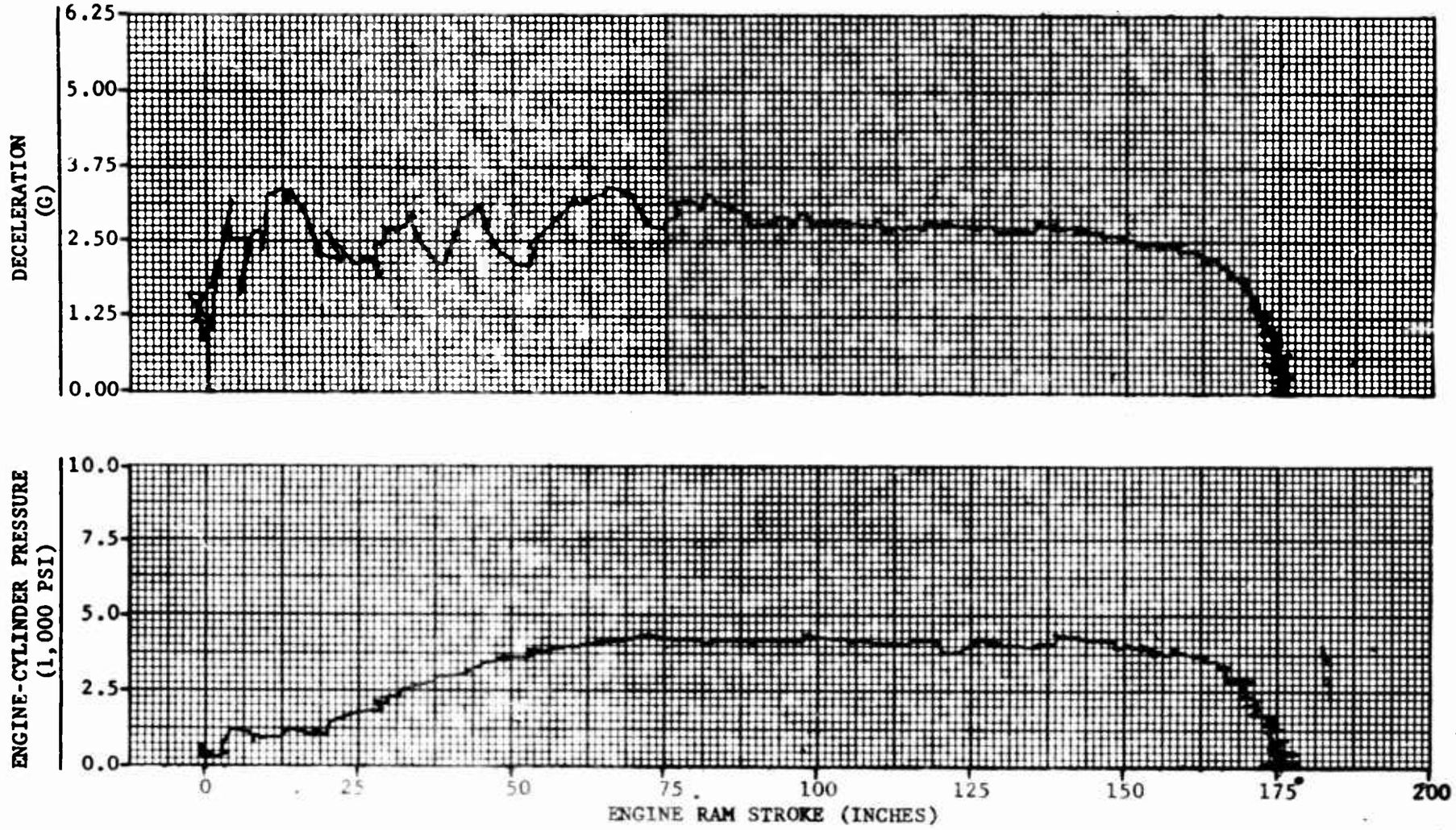


Figure A15 - Continued

EVENT NO.			21823	21713	21599	21650	21610	21601	21611	21651	21824	21652
DATE			11 JUL 67	20 JUN 67	7 JAN 67	13 JUN 67	8 JUN 67	7 JAN 67	8 JUN 67	13 JUN 67	11 JUL 67	13 JUN 67
AIR-CRAFT	TYPE		A-3A	→	→	→	→	→	→	→	→	→
	CONFIGURATION		CLEAN	→	→	→	→	→	→	→	→	→
	GROSS WEIGHT (LB)		50,100	48,800	49,800	49,200	49,700	49,300	49,400	48,900	49,900	48,700
ARG WEIGHT SETTING			50,000	49,000	50,000	49,500	49,500	49,500	49,500	49,000	50,000	49,000
TYPE LANDING			TA	TA	TA	TA	TA	TA	TA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	0	9	5	5	8	5	4	5	0	9
		REL DIR (°)	0	030	270	175	315	270	315	175	0	180
	TEMPERATURE (° F)		78	68	81	—	84	81	84	—	79	—
	PRESSURE (IN. HG)		29.725	29.795	30.010	—	30.100	30.010	30.100	—	29.725	—
ENGAGING SPEED (KN)			98	117	119	124	125	128	133	134	134	137
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0	0	0	0
ENGINE RPM (%)	WIRE PICKUP		89	98	86	95	82.8	94.8	98.3	99	95	96
	MAX ARG AXIAL LOAD		94	101	102	101	101	100.4	102	100	97	101
ARREST-ING HOOK	AXIAL LOAD (LB)		100,330	144,040	143,664	161,176	156,904	170,424	176,852	184,592	169,688	189,256
	TIME (SEC)		2.387	1.933	1.420	1.411	1.140	1.149	1.094	1.675	1.634	1.097
LONG. DECEL	LOAD (G)		2.232	2.742	2.678	2.951	2.974	3.311	3.402	3.362	3.412	3.616
	TIME (SEC)		2.725	2.001	1.045	1.844	1.378	0.894	1.391	1.646	1.372	0.926
CABLE TENSION	PORT (LB)		60,949	83,807	81,019	92,357	95,943	95,065	98,647	100,610	99,976	104,245
	STARBOARD (LB)		58,667	72,309	76,833	81,218	79,879	92,060	92,907	96,972	97,676	93,859
CYLINDER PRESSURE (PSI)			5934	8172	8049	9113	9051	9700	9870	10,450	10,341	10,596
RAM TRAVEL (IN.)			182	183	183	183	184	184	184	183	186	182
BATTERY POSITION (IN.)			8 15/16	3 7/8	5 3/4	4 9/16	5 1/8	5 1/2	5 1/8	4 9/16	5 7/16	4 9/16
DIST FROM TWO-BLOCK (KN)			4	6	3	—	—	2	—	—	—	—

REMARKS:

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

NATF-EN-1100

EVENT NO.			21694		21613	21614*	21653	21712	21710	21695*	21711*	22080
DATE			15 JUN67		8 JUN67	8 JUN67	13 JUN67	20 JUN67	20 JUN67	15 JUN67	20 JUN67	11 AUG67
AIR-CRAFT	TYPE		A-3A		A-3A	→	→	→	→	→	→	→
	CONFIGURATION		CLEAN		CLEAN	→	→	→	→	→	→	→
	GROSS WEIGHT (LB)		48,500		49,000	48,600	48,100	49,000	49,300	48,100	49,300	50,000
ARG WEIGHT SETTING			48,500		49,000	48,400	48,000	49,000	50,000	48,000	49,000	50,000
TYPE LANDING			TA		TA	TA	TA	TA	TA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	10		5	5	7	10	15	5	15	3
		REL DIR (°)	330		330	000	180	030	030	315	030	090
	TEMPERATURE (° F)		80		84	84	69	68	69	80	068	70
	PRESSURE (IN. HG)		29.920		30.100	30.100	—	29.795	29.795	29.920	29.795	30.060
ENGAGING SPEED (KN)			137		106	113	117	124	125	125	126	130
OFF-CENTER DISTANCE (FT)			0		20 P	20 P	20 P	20 P	20 P	20 P	20 P	20 P
ENGINE RPM (%)	WIRE PICKUP		100		101	97	91	97	98	99	97	96
	MAX ARG AXIAL LOAD		95		103	99.6	101	102	103	102	101	101
ARREST-ING HOOK	AXIAL LOAD (LB)		164,424		127,453	135,912	146,582	174,255	165,000	164,560	174,040	181,816
	TIME (SEC)		1.716		1.813	1.742	2.094	1.796	1.739	1.817	1.807	1.749
LONG. DECEL	LOAD (G)		3.582		2.463	2.640	2.730	3.260	3.045	3.190	3.179	3.457
	TIME (SEC)		0.806		1.662	1.159	1.009	1.958	1.527	1.423	1.778	1.758
CABLE TENSION	PORT (LB)		96,274		64,645	88,387	95,157	106,962	102,373	102,561	106,092	110,038
	STARBOARD (LB)		96,971		59,081	59,432	65,468	77,343	72,366	73,395	76,025	83,180
CYLINDER PRESSURE (PSI)			10,316		7001	7982	8345	9809	9300	9396	9685	10,436
RAM TRAVEL (IN.)			184		181	183	182	186	184	184	185	177
BATTERY POSITION (IN.)			4 3/16		5	4 3/4	4 9/16	4 1/2	3 7/8	4 3/16	3 7/8	3 1/2
DIST FROM TWO-BLOCK (KN)			—		—	—	—	—	5	—	—	12

REMARKS:

* Replaced aircraft arresting-hook bumper, PN 4545527-501

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			21692	21612	22081	21617	21693		21636	21637	21638	21640
DATE			15 JUN67	8 JUN67	11 AUG67	8 JUN67	15 JUN67		9 JUN67	9 JUN67	9 JUN67	9 JUN67
AIR-CRAFT	TYPE		A-3A	→	→	→	→		→	→	→	→
	CONFIGURATION		CLEAN	→	→	→	→		→	→	→	→
	GROSS WEIGHT (LB)		49,400	49,200	49,800	47,900	48,800		41,400	41,000	40,600	40,100
ARG WEIGHT SETTING			49,500	49,000	50,000	48,000	49,000		41,500	41,000	40,500	40,000
TYPE LANDING			TA	TA	TA	TA	TA		TA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	5	5	3	3	3		5	5	5	4
		REL DIR (°)	315	330	090	270	330		315	315	335	335
	TEMPERATURE (° F)		80	84	70	84	80		84	84	84	84
	PRESSURE (IN. HG)		29.920	30.100	30.060	30.100	29.920		29.908	29.908	29.908	29.908
ENGAGING SPEED (KN)			133	135	136	113	115		98	110	120	129
OFF-CENTER DISTANCE (FT)			20 P	20 P	20 P	20.5	20 S		0	0	0	0
ENGINE RPM (%)	WIRE PICKUP		100	99.5	100	81.4	96		96.4	95	92	86
	MAX ARG AXIAL LOAD		95	103	101	90.5	100		100	101	101	99
ARREST-ING HOOK	AXIAL LOAD (LB)		180,440	182,000	194,256	118,216	138,480		100,054	112,063	127,136	134,928
	TIME (SEC)		1.730	1.472	1.709	0.953	1.538		2.475	2.185	1.878	1.955
LONG. DECEL	LOAD (G)		3.451	3.646	3.652	2.640	2.649		2.012	2.322	2.794	3.134
	TIME (SEC)		1.087	1.541	1.054	0.964	1.925		2.314	2.050	1.882	0.868
CABLE TENSION	PORT (LB)		113,364	NV	113,812	56,289	65,111		63,658	69,182	71,988	72,914
	STARBOARD (LB)		79,692	81,893	90,696	71,539	80,499		49,804	57,619	68,093	73,344
CYLINDER PRESSURE (PSI)			10,207	10,314	11,211	6284	7830		5785	6403	7317	7677
RAM TRAVEL (IN.)			185	185	178	184	183		182	182	183	184
BATTERY POSITION (IN.)			4 3/16	5	3 1/2	4 3/4	4 3/16		4 3/4	4 3/4	4 3/4	4 3/4
DIST FROM TWO-BLOCK (KN)			—	—	11	—	—		—	—	—	—

REMARKS:

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			21639	21715	22003 *	22049	22053	22002		22050	22084	22087 *
DATE			9 JUN67	20 JUN67	28 JUL67	8 AUG67	8 AUG67	28 JUL67		8 AUG67	28 JUL67	14 AUG67
AIR-CRAFT	TYPE		A-3A	→	→	→	→	→		→	→	→
	CONFIGURATION		CLEAN	→	→	→	→	→		→	→	→
	GROSS WEIGHT (LB)		40,300	41,300	40,500	42,000	40,800	41,600		41,600	42,000	41,600
ARG WEIGHT SETTING			40,500	41,500	40,500	42,000	41,000	42,000		41,500	42,000	42,000
TYPE LANDING			TA	RA	TA	TA	TA	TA		TA	RA	RA
AMBIENT CONDITION	WIND	VEL (KN)	4	10	4	5	4	–		5	2	0
		REL DIR (°)	335	030	220	210	210	–		210	270	0
	TEMPERATURE (° F)		84	68	79	–	–	79		–	79	68
	PRESSURE (IN. HG)		29.908	29.795	29.900	30.08	–	29.900		30,008	29.900	30.090
ENGAGING SPEED (KN)			132	143	147	148	149	154		124	129	129
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0		20 P	20 P	20 P
ENGINE RPM (%)	WIRE PICKUP		96.2	72	96	94.2	90	90		95	89	93
	MAX ARG AXIAL LOAD		102	82	–	99.5	100	100		98.7	NV	100
ARREST-ING HOOK	AXIAL LOAD (LB)		152,016	167,504	NV	189,584	174,592	188,848		148,848	NV	159,040
	TIME (SEC)		1.866	1.767	NV	1.661	1.709	1.515		1.908	NV	1.986
LONG. DECEL	LOAD (G)		3.372	3.664	4.123	4.153	3.915	4.333		3.172	3.165	3.389
	TIME (SEC)		1.878	1.054	1.687	1.576	1.626	0.655		1.944	0.889	1.990
CABLE TENSION	PORT (LB)		85,434	NV	99,505	104,234	94,818	103,711		91,415	63,243	94,048
	STARBOARD (LB)		81,288	85,260	99,822	101,943	92,834	102,672		70,538	98,463	76,703
CYLINDER PRESSURE (PSI)			8729	9779	10,888	11,256	10,367	11,336		8895	8643	9311
RAM TRAVEL (IN.)			184	185	185	185	181	184		183	183	180
BATTERY POSITION (IN.)			4 3/4	3 15/16	4 1/4	4 1/8	3 1/2	4 1/4		4 1/8	4 1/4	3 3/4
DIST FROM TWO-BLOCK (KN)			–	–	9	7	11	10		9	9	9

REMARKS:

* Replaced aircraft arresting-hook bumper, PN 4545527-501

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.		22051	22083*	22084*	22088*	22052					
DATE		8 AUG 67	11 AUG 67	11 AUG 67	14 AUG 67	8 AUG 67					
AIR-CRAFT	TYPE	A-3A	→	→	→	→					
	CONFIGURATION	CLEAN	→	→	→	→					
	GROSS WEIGHT (LB)	41,400	41,600	41,100	41,200	41,000					
ARG WEIGHT SETTING		41,500	42,000	41,500	41,000	41,000					
TYPE LANDING		TA	BA	TA	TA	TA					
AMBIENT CON-DITION	WIND VEL (KN)	4	3	3	0	4					
	WIND REL DIR (°)	210	090	090	0	210					
	TEMPERATURE (° F)	—	70	70	68	—					
	PRESSURE (IN. HG)	—	30.060	30.060	30.090	30.008					
ENGAGING SPEED (KN)		135	135	135	141	150					
OFF-CENTER DISTANCE (FT)		20P	20P	20P	20P	20P					
ENGINE RPM (%)	WIRE PICKUP	94	100	94	100	92					
	MAX ARG AXIAL LOAD	99	101	99	100	99					
ARREST-ING HOOK	AXIAL LOAD (LB)	164,904	169,120	163,480	181,000	197,728					
	TIME (SEC)	1.813	1.901	1.850	1.771	1.709					
LONG. DECEL	LOAD (G)	3.623	3.607	3.561	3.872	4.389					
	TIME (SEC)	1.819	1.913	1.858	1.384	1.749					
CABLE TENSION	PORT (LB)	99,959	101,000	99,368	108,781	115,277					
	STARBOARD (LB)	77,557	76,600	75,205	88,465	90,496					
CYLINDER PRESSURE (PSI)		9766	9811	9592	10,949	11,582					
RAM TRAVEL (IN.)		181	181	181	181	182					
BATTERY POSITION (IN.)		3 1/2	3 1/2	3 1/2	3 3/16	3 1/2					
DIST FROM TWO-BLOCK (KN)		11	—	—	—	10					

REMARKS:

* Replaced aircraft arresting-hook bumper, PN 4545527-501

NATF-EN-1100

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			22104	22105	22107	22111	22159	22109 *	22115		22106*	22108*
DATE			15AUG67	15AUG67	15AUG67	15AUG67	18AUG67	15AUG67	15AUG67		15AUG67	15AUG67
AIR-CRAFT	TYPE		A-3A	→	→	→	→	→	→		A-3A	→
	CONFIGURATION		CLEAN	→	→	→	→	→	→		CLEAN	→
	GROSS WEIGHT (LB)		50,000	49,700	48,500	49,400	49,800	50,000	50,000		49,500	48,300
ARG WEIGHT SETTING			50,000	50,000	48,500	49,500	50,000	50,000	50,000		49,500	48,500
TYPE LANDING			TA	TA	TA	TA	TA	TA	TA		TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	3	0	0	5	5	0	0		0	0
		REL DIR (°)	0	0	0	060	310	0	0		0	0
	TEMPERATURE (° F)		73	73	73	73	—	73	—		73	73
	PRESSURE (IN. HG)		30.160	30.160	30.160	30.160	—	30.160	30.170		30.160	30.160
ENGAGING SPEED (KN)			100	111	127	129	132	135	133		101	110
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0		20 P	20 P
ENGINE RPM (%)	WIRE PICKUP		89	91	89	99	98	95	94		98	94
	MAX ARG AXIAL LOAD		101	100	101	100	100	100	99		101	99
ARREST-ING HOOK	AXIAL LOAD (LB)		135,866	129,769	163,056	174,280	179,752	179,304	180,280		120,963	138,256
	TIME (SEC)		1.076	1.000	1.805	1.906	1.053	1.547	1.582		2.071	2.085
LONG. DECEL	LOAD (G)		2.045	2.435	3.095	3.311	3.519	3.321	3.411		2.237	2.587
	TIME (SEC)		1.071	1.004	0.938	1.302	1.122	1.139	1.292		2.062	1.725
CABLE TENSION	PORT (LB)		59,376	71037	92,327	95,773	90,967	99,723			78,746	84,283
	STARBOARD (LB)		57,297	69,110	84,882	87,958	93,709	93,109			56,145	64,527
CYLINDER PRESSURE (PSI)			5956	7113	9488	10,070	10,203	10,361	10317		6906	7890
RAM TRAVEL (IN.)			177	178	180	180	178	180	180		178	179
BATTERY POSITION (IN.)			3	3	2 7/8	2 5/8	2 1/8	2 7/8	2 1/2		3	2 7/8
DIST FROM TWO-BLOCK (KN)			12	11	9	9	12	9	9		11	10

REMARKS:

* Replaced aircraft arresting-hook bumper, PN 4545527-501

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			22110 *	22161*	22160		22133	22181	22130	22134	22174	22179
DATE			15AUG67	18AUG67	18AUG67		16AUG67	22AUG67	16AUG67	21AUG67	21AUG67	22AUG67
AIR-CRAFT	TYPE		A-3A	→	→		A-3A	→	→	→	→	→
	CONFIGURATION		CLEAN	→	→		CLEAN	→	→	→	→	→
	GROSS WEIGHT (LB)		49,800	49,100	49,400		41,100	41,000	41,800	40,800	40,600	42,000
ARG WEIGHT SETTING			50,000	49,000	50,000		41,000	41,000	42,000	41,000	40,500	42,000
TYPE LANDING			TA	TA	TA		TA	TA	TA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	5	5	5		5	5	3	5	6	5
		REL DIR (°)	060	310	310		180	320	200	180	000	320
	TEMPERATURE (° F)		73	—	—		—	71	—	—	79	71
	PRESSURE (IN. HG)		30.160	—	—		30.280	30.030	30.280	30.280	30.010	30.030
ENGAGING SPEED (KN)			122	127	128		97	111	112	121	134	134
OFF-CENTER DISTANCE (FT)			20P	20P	20P		0	0	0	0	0	0
ENGINE RPM (%)	WIRE PICKUP		94	91.8	94		91	97	90	92	—	95
	MAX ARG AXIAL LOAD		100	98.3	99.9		96	99	95	101	—	101
ARREST-ING HOOK	AXIAL LOAD (LB)		164,824	176,856	175,816		93,992	120,648	119,739	127,919	147,784	156,920
	TIME (SEC)		1.690	1.839	1.184		3.612	2.146	2.220	2.104	1.943	1.702
LONG. DECEL	LOAD (G)		3.179	3.377	3.486		2.036	2.642	2.609	2.731	3.303	3.467
	TIME (SEC)		1.266	1.602	1.193		2.569	1.879	1.064	2.083	1.589	1.626
CABLE TENSION	PORT (LB)		103,786	105,098	105,577		56,371	67,464	66,014	73,541	NR	86,927
	STARBOARD (LB)		72,050	76,604	90693		53,574	63,193	63,568	66,756	NR	85,668
CYLINDER PRESSURE (PSI)			9223	9918	9703		5427	6860	6880	7434	8754	9093
RAM TRAVEL (IN.)			179	179	178		177	178	178	179	181	178
BATTERY POSITION (IN.)			2 5/8	2 1/8	2 1/8		2 1/4	1 13/16	2 1/4	2 1/4	1 9/16	1 13/16
DIST FROM TWO-BLOCK (KN)			10	11	12		13	12	12	11	12	12

REMARKS:

* Replaced aircraft arresting-hook bumper, PN 4545527-501

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			22131	22132 *	22135	22180*					
DATE			16AUG67	16AUG67	16AUG67	22AUG67					
AIR-CRAFT	TYPE		A-3A	→	→	→					
	CONFIGURATION		CLEAN	→	→	→					
	GROSS WEIGHT (LB)		41,600	41,300	40,600	41,500					
ARG WEIGHT SETTING			41,500	41,500	41,500	41,500					
TYPE LANDING			TA	TA	TA	TA					
AMBIENT CON-DITION	WIND	VEL (KN)	3	3	5	5					
		REL DIR (°)	200	200	180	320					
	TEMPERATURE (° F)		—	—	—	71					
	PRESSURE (IN. HG)		30.280	30.280	30.280	30.030					
ENGAGING SPEED (KN)			98	112	122	135					
OFF-CENTER DISTANCE (FT)			20P	20P	20P	20P					
ENGINE RPM (%)	WIRE PICKUP		92	104	94	95					
	MAX ARG AXIAL LOAD		101	102	100	102					
ARREST-ING HOOK	AXIAL LOAD (LB)		101,864	126,796	144,016	180,832					
	TIME (SEC)		2.564	2.174	2.009	1.668					
LONG. DECEL	LOAD (G)		1.994	2.758	3.164	4.173					
	TIME (SEC)		2.417	2.278	2.119	1.687					
CABLE TENSION	PORT (LB)		63,587	80,345	86,071	102,726					
	STARBOARD (LB)		46,169	57,423	66,856	75,499					
CYLINDER PRESSURE (PSI)			5880	7432	8442	9715					
RAM TRAVEL (IN.)			178	179	180	181					
BATTERY POSITION (IN.)			2 1/4	2 1/4	2	1 13/16					
DIST FROM TWO-BLOCK (KN)			12	11	10	9					

REMARKS:

* Replaced aircraft arresting-hook bumper, PN 4545527-501

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.		22054	22055	22089	22094	22093	22090	22091*	22092	22095 *	22096 *
DATE		8 AUG 67	8 AUG 67	14 AUG 67	14 AUG 67	14 AUG 67	14 AUG 67	14 AUG 67	14 AUG 67	14 AUG 67	14 AUG 67
AIR-CRAFT	TYPE	A-3A	→	→	→	→	→	→	→	→	→
	CONFIGURATION	CLEAN	→	→	→	→	→	→	→	→	→
	GROSS WEIGHT (LB)	40,600	39,900	40,900	41,500	41,800	40,600	40,300	40,000	41,200	40,600
ARG WEIGHT SETTING		50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
TYPE LANDING		TA	TA	TA	TA	TA	TA	TA	TA	TA	TA
AMBIENT CON-DITION	WIND VEL (KN)	5	5	4	5	4	0	3	1	5	6
	WIND REL DIR (°)	180	180	330	030	360	000	330	000	000	030
	TEMPERATURE (° F)	—	—	68	75	75	68	68	68	75	75
	PRESSURE (IN. HG)	—	—	30.090	30.090	30.090	30.090	30.090	30.090	30.090	30.090
ENGAGING SPEED (KN)		119	133	139	141	145	146	121	138	139	141
OFF-CENTER DISTANCE (FT)		0	0	0	0	0	0	20P	20P	20P	20P
ENGINE RPM (%)	WIRE PICKUP	95.8	93	93	100.7	93	97	97	99	98	93
	MAX ARG AXIAL LOAD	98.8	99	101	102.2	99	97	99	101	100	98
ARREST-ING HOOK	AXIAL LOAD (LB)	141,672	154,306	169536	181,872	185,072	182,936	145,757	175,584	178,792	180,168
	TIME (SEC)	1.094	0.887	1.051	0.851	0.787	0.798	0.870	0.767	0.805	0.803
LONG. DECEL	LOAD (G)	3,234	NU	3.956	4.095	4.123	4.062	3.338	4.315	4.130	4.107
	TIME (SEC)	0.978	NU	1.056	0.860	0.997	0.679	0.858	0.777	0.801	0.798
CABLE TENSION	PORT (LB)	74,713	87,057	92,842	100,387	100,019	101,094	89,744	100,051	105,002	101,990
	STARBOARD (LB)	76,563	82,685	89,832	94,689	95,220	92,750	72,445	86,914	84,338	86641
CYLINDER PRESSURE (PSI)		8124	9171	9670	10,479	10,409	10681	8066	9610	9768	9751
RAM TRAVEL (IN.)		175	179	177	178	178	177	176	177	178	178
BATTERY POSITION (IN.)		3	3	3 3/16	"	3	3	3	3	2 1/2	2 1/2
DIST FROM TWO-BLOCK (KN)		17	13	12	11	11	12	13	12	11	11

REMARKS:

* Replaced aircraft arresting-hook bumper, PN 4545527-501

A-3A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, SINGLE Weight Setting

EVENT NO.			21591	21748	21750	21605	21958	21654	21606	21961		21655
DATE			7 JUN 67	23 JUN 67	23 JUN 67	8 JUN 67	24 JUL 67	13 JUN 67	8 JUN 67	25 JUL 67		13 JUN 67
AIR-CRAFT	TYPE		A-4B	→	→	→	→	→	→	→		→
	CONFIGURATION		300 GAL & AND WING TANKS	→	→	→	→	→	→	→		→
	GROSS WEIGHT (LB)		13,400	14,000	13,200	14,200	14,300	13,800	14,000	13,500		13,700
ARG WEIGHT SETTING			13,500	14,000	13,200	14,000	14,500	14,000	14,000	13,500		13,500
TYPE LANDING			TA	FA	FA	TA	TA	FA	TA	TA		TA
AMBIENT CON-DITION	WIND	VEL (KN)	5	5	4	5	3	10	5	3		6
		REL DIR (°)	225	330	360	360	350	180	360	350		175
	TEMPERATURE (° F)		79	50	50	74	76	—	74	76		—
	PRESSURE (IN. HG)		30.040	—	—	30.030	29.840	—	30.030	29.840		—
ENGAGING SPEED (KN)			111	119	123	131	132	133	135	137		118
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0	0		20P
ENGINE RPM (%)	WIRE PICKUP		86	97	94	69	94	96	81	96		98.3
	MAX ARG AXIAL LOAD		93	98	97	72	95	99	83	100		99.7
ARREST-ING HOOK	AXIAL LOAD (LB)		55,075	57,313	60628	68,473	68,734	70,090	72,941	72,458		70,570
	TIME (SEC)		0.319	0.312	0.303	0.287	0.287	0.283	0.285	0.278		0.220
LONG. DECEL	LOAD (G)		3.398	3.586	3.862	4.383	4.542	4.434	4.536	5.160		3.968
	TIME (SEC)		0.324	0.318	0.310	0.292	0.293	0.287	0.289	0.150		0.230
CABLE TENSION	PORT (LB)		58,311	54,199	56,124	63,327	57,122	70,273	68,360	60,399		62,126
	STARBOARD (LB)		48,218	50,877	50,641	60,747	60,306	53,850	60,419	66,581		45,135
CYLINDER PRESSURE (PSI)			1777	2140	2419	2354	2474	2652	2500	2674		2245
RAM TRAVEL (IN.)			182	180	181	176	178	180	177	176		184
BATTERY POSITION (IN.)			5 3/4	3 13/16	3 13/16	5 1/8	5 1/16	4 1/2	5 1/8	5 1/16		4 1/2
DIST FROM TWO-BLOCK (KN)			4	14	13	19	8	15	18	12		—

REMARKS:

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			21968	21969	21630	21628	21633	21635	21631	21634		21595
DATE			25JUL67	25JUL67	9JUN67	9JUN67	9JUN67	9JUN67	9JUN67	9JUN67		7JUN67
AIR-CRAFT	TYPE		A-4B	→	→	→	→	→	→	→		→
	CONFIGURATION		300 GAL ℄ AND WING TANKS	→	→	→	→	→	→	→		→
	GROSS WEIGHT (LB)		14,200	14,000	13,900	14,300	14,300	13,700	13,800	14,100		12,100
ARG WEIGHT SETTING			14,000	14,000	14,000	14,500	14,500	13,500	14,000	14,000		12,000
TYPE LANDING			TA	TA	TA	TA	TA	TA	TA	TA		RA
AMBIENT CON-DITION	WIND	VEL (KN)	4	4	10	5	0	5	5	3		5
		REL DIR (°)	280	280	340	315	0	315	315	315		270
	TEMPERATURE (° F)		81	81	77	77	84	84	77	84		81
	PRESSURE (IN. HG)		29.850	29.850	30.005	30.005	29.908	29.908	30.005	29.908		30.010
ENGAGING SPEED (KN)			132	134	120	125	125	131	134	138		100
OFF-CENTER DISTANCE (FT)			20 P	20P	20 S	20S	20S	20S	20S	20S		0
ENGINE RPM (%)	WIRE PICKUP		90	107	82	84	92	100	99.5	100		93
	MAX ARG AXIAL LOAD		91	108	85	86	95	102	99.5	100		95
ARREST-ING HOOK	AXIAL LOAD (LB)		75,159	76,183	69,220	67,074	66,314	75,207	76,896	77,336		46,734
	TIME (SEC)		0.180	0.205	0.213	0.207	0.353	0.208	0.200	0.351		0.339
LONG. DECEL	LOAD (G)		4.742	4.912	4.313	4.123	4.127	4.429	4.314	4.653		2.962
	TIME (SEC)		0.213	0.214	0.222	0.214	0.477	0.217	0.465	0.361		0.348
CABLE TENSION	PORT (LB)		52,420	60,644	53861	52,564	51,781	66,680	55,911	57,467		50,659
	STARBOARD (LB)		69,539	72,478	52939	51,991	51,957	59,494	54,950	57,681		44,468
CYLINDER PRESSURE (PSI)			2819	2833	2105	2318	2613	2539	2609	2829		1402
RAM TRAVEL (IN.)			177	177	177	179	179	179	179	179		179
BATTERY POSITION (IN.)			5	5	4 3/4	4 3/4	4 3/4	4 3/4	4 3/4	4 3/4		5 3/4
DIST FROM TWO-BLOCK (KN)			12	10	10	8	8	8	8	8		12

REMARKS:

NATF-EN-1100

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.		21594	21751	21592	21596	21609	21962	21963	21964		21624
DATE		7 JUN 67	23 JUN 67	7 JUN 67	7 JUN 67	8 JUN 67	25 JUL 67	25 JUL 67	25 JUL 67		8 JUN 67
AIR-CRAFT	TYPE	A-4B	→	→	→	→	→	→	→		→
	CONFIGURATION	300 GAL. & AND WING TANKS	→	→	→	→	→	→	→		→
	GROSS WEIGHT (LB)	12,200	12,100	12,500	12,000	12,400	12,300	12,100	11,900		12,100
ARG WEIGHT SETTING		12,000	12,000	12,500	12,000	12,500	12,500	12,000	12,000		12,000
TYPE LANDING		TA	FA	FA	TA	FA	TA	TA	TA		TA
AMBIENT CONDITION	WIND VEL (KN)	0	5	5	7	5	3	4	4		10
	WIND REL DIR (°)	0	330	270	270	0	350	350	350		270
	TEMPERATURE (° F)	79	82	79	81	74	76	76	76		84
	PRESSURE (IN. HG)	30.040	—	30.040	30.010	30.030	29.840	29.840	29.840		30.100
ENGAGING SPEED (KN)		113	119	124	129	130	139	142	143		116
OFF-CENTER DISTANCE (FT)		0	0	0	0	0	0	0	0		20P
ENGINE RPM (%)	WIRE PICKUP	86	97	102.8	96	73	85	93	90		86
	MAX ARG AXIAL LOAD	87	90	100.8	96	76	87	94	93		92
ARREST-ING HOOK	AXIAL LOAD (LB)	55251	56,529	60,928	64,564	62,458	73,549	NV	72,013		54,961
	TIME (SEC)	0.317	0.307	0.302	0.290	0.289	0.278	NV	0.279		0.383
LONG. DECEL	LOAD (G)	3.680	4.095	3.753	4.248	4.330	5.809	NV	5.392		4.025
	TIME (SEC)	0.322	0.314	0.307	0.293	0.301	0.148	NV	0.150		0.230
CABLE TENSION	PORT (LB)	55505	55726	61386	72,472	65,374	65,890	NV	62,806		50,675
	STARBOARD (LB)	49559	47782	52,384	52,842	50,635	58,341	NV	64,080		41,946
CYLINDER PRESSURE (PSI)		1677	2075	2118	2219	1984	2536	NV	2604		1731
RAM TRAVEL (IN.)		177	182	178	177	176	176	177	177		176
BATTERY POSITION (IN.)		5 3/4	3 13/16	5 3/4	5 3/4	5 1/8	5 11/16	5 11/16	5 11/16		4 3/4
DIST FROM TWO-BLOCK (KN)		10	6	8	9	—	11	10	10		11

REMARKS:

NATF-EN-1100

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			21622	21626	21966	21965	21970				
DATE			8 JUN 67	8 JUN 67	25 JUL 67	25 JUL 67	25 JUL 67				
AIR-CRAFT	TYPE		A-4B	→	→	→	→				
	CONFIGURATION		300 GAL & AND WING TANKS	→	→	→	→				
	GROSS WEIGHT (LB)		12,400	11,700	11,600	11,700	12,400				
ARG WEIGHT SETTING			12,500	11,500	11,500	11,500	12,500				
TYPE LANDING			TA	TA	TA	TA	TA				
AMBIENT CON-DITION	WIND	VEL (KN)	0	5	4	4	10				
		REL DIR (°)	0	315	350	350	300				
	TEMPERATURE (° F)		84	84	76	76	81				
	PRESSURE (IN. HG)		30.103	30.100	29.840	29.840	29.850				
ENGAGING SPEED (KN)			118	127	136	142	142				
OFF-CENTER DISTANCE (FT)			20P	20P	20P	20P	20P				
ENGINE RPM (%)	WIRE PICKUP		87.4	86	89	97	103				
	MAX ARG AXIAL LOAD		88.3	88.4	90	100	104				
ARREST-ING HOOK	AXIAL LOAD (LB)		57,119	64,016	71,075	80,963	83,631				
	TIME (SEC)		0.399	0.360	0.181	0.177	0.170				
LONG. DECEL	LOAD (G)		4.529	4.925	5.384	5.471	6.221				
	TIME (SEC)		0.388	0.380	0.359	0.200	0.192				
CABLE TENSION	PORT (LB)		54,937	58,527	54,731	59,978	56,391				
	STARBOARD (LB)		42,462	49,597	64,794	62,257	61,984				
CYLINDER PRESSURE (PSI)			1696	2036	2303	2773	2790				
RAM TRAVEL (IN.)			176	178	177	178	177				
BATTERY POSITION (IN.)			4 3/4	4 3/4	5 1/16	5 1/16	5				
DIST FROM TWO-BLOCK (KN)			—	—	—	—	—				

REMARKS:

NATF-EN-1100

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			22112	22119	22113	22124	22116	22137	22138		22114	22121
DATE			15 AUG 67	16 AUG 67	15 AUG 67	16 AUG 67	22 AUG 67	16 AUG 67	16 AUG 67		15 AUG 67	16 AUG 67
AIR-CRAFT	TYPE		A-4B	→	→	→	→	→	→		→	→
	CONFIGURATION		900 GAL. & AND WING TANKS	→	→	→	→	→	→		→	→
	GROSS WEIGHT (LB)		14,200	14,500	13,400	13,700	14,400	14,400	14,300		13,200	14,200
ARG WEIGHT SETTING			14,500	14,500	13,500	13,500	14,600	14,500	14,500		13,500	14,000
TYPE LANDING			BA	IA	IA	IA	IA	IA	IA		IA	IA
AMBIENT CON-DITION	WIND	VEL (KN)	0	0	0	0	5	5	5		0	0
		REL DIR (°)	0	0	0	0	320	180	180		0	0
	TEMPERATURE (° F)		—	—	—	—	69	—	—		—	—
	PRESSURE (IN. HG)		30.170	30.220	30.170	30.150	30.020	30.280	30.220		30.170	30.280
ENGAGING SPEED (KN)			96	101	115	122	123	121	121		95	118
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0		20P	20P
ENGINE RPM (%)	WIRE PICKUP		85	99	84	86	96	94	92		87	90.7
	MAX ARG AXIAL LOAD		70	90	85	86	96	89	94		87	93.2
ARREST-ING HOOK	AXIAL LOAD (LB)		51,014	51,319	66,359	74,961	71,875	72,450	72,209		46,387	44,075
	TIME (SEC)		0.282	0.268	0.258	0.249	0.247	0.243	0.244		0.417	0.409
LONG. DECEL	LOAD (G)		3.537	3.467	4.42	5.083	4.291	4.593	4.519		3.063	2.800
	TIME (SEC)		0.290	0.274	0.206	0.247	0.242	0.243	0.244		0.412	0.409
CABLE TENSION	PORT (LB)		49,776	53,725	64,944	66,614	70,952	74,309	69,942		42,163	54,312
	STARBOARD (LB)		49,237	50,779	60,044	64,963	65,280	68,459	68,039		45,159	45,480
CYLINDER PRESSURE (PSI)			1666	1693	2058	2105	2203	2294	2291		1625	1738
RAM TRAVEL (IN.)			162	162	193	177	176	178	178		167	174
BATTERY POSITION (IN.)			2 3/4	2 1/2	2 1/2	2 1/2	1 9/16	2	2		2 1/2	2 1/2
DIST FROM TWO-BLOCK (KN)			27	27	16	12	14	12	12		20	15

REMARKS:

NATC-EP-1100

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.	22140	22134	22175	22178	22189	22190	22126	22191	22127	22128
DATE	16 AUG 67	16 AUG 67	22 AUG 67	22 AUG 67	22 AUG 67	22 AUG 67	16 AUG 67	22 AUG 67	16 AUG 67	16 AUG 67
AIRCRAFT — TYPE	A-4B	→	→	→	→	→	→	→	→	→
AIRCRAFT — CONFIGURATION	300 GAL ℄ AND WING TANKS	→	→	→	→	→	→	→	→	→
AIRCRAFT — GROSS WEIGHT (LB)	14,100	14,200	14,500	14,100	13,800	13,700	12,000	12,300	11,900	11,800
ARG WEIGHT SETTING	14,000	14,000	14,500	14,000	14,000	14,000	12,000	12,500	12,000	12,000
TYPE LANDING	TA	TA	RA	FA	TA	TA	TA	TA	TA	TA
AMBIENT CONDITION — WIND — VEL (KN)	5	5	5	5	5	5	3	5	3	3
AMBIENT CONDITION — WIND — REL DIR (°)	180	180	320	320	330	000	180	000	180	180
AMBIENT CONDITION — TEMPERATURE (° F)	—	—	69	71	75	75	—	75	—	—
AMBIENT CONDITION — PRESSURE (IN. HG)	30.280	30.280	30.020	30.030	30.030	30.030	30.280	30.030	30.280	30.280
ENGAGING SPEED (KN)	119	121	128	133	133	135	112	122	95	107
OFF-CENTER DISTANCE (FT)	20P	20P	20P	20P	20P	20P	0	0	20P	20P
ENGINE RPM (%) — WIRE PICKUP	89.7	70.8	104	76	79	79	82	80	78.1	85
ENGINE RPM (%) — MAX ARG AXIAL LOAD	91.7	95.2	107	73	82	83	84	86	81.9	86
ARRESTING HOOK — AXIAL LOAD (LB)	61,997	63,771	70,519	73,650	72,422	51,577	64,826	74,660	39,959	48,290
ARRESTING HOOK — TIME (SEC)	0.350	0.337	0.331	0.315	0.313	0.307	0.263	0.255	0.414	0.352
LONG. DECEL — LOAD (G)	4.094	3.868	4.316	4.607	5.627	5.709	4.720	5.520	3.120	3.706
LONG. DECEL — TIME (SEC)	0.354	0.357	0.333	0.305	0.324	0.316	0.264	0.254	0.426	0.321
CABLE TENSION — PORT (LB)	73,540	79,356	84,563	68,247	90,073	87,557	58,176	67,523	52,234	61,647
CABLE TENSION — STARBOARD (LB)	60,132	64,464	72,863	73,916	68,047	70,034	54,574	64,669	46,135	53,079
CYLINDER PRESSURE (PSI)	2872	3113	3923	3511	3084	3194	[illegible]	2512	1351	1837
RAM TRAVEL (IN.)	178	179	179	179	179	179	178	178	174	176
BATTERY POSITION (IN.)	2	2	1 9/16	1 7/16	1 3/4	1 3/4	2 7/16	1 3/4	2 7/16	2 7/16
DIST FROM TWO-BLOCK (KN)	12	11	11	11	11	11	11	12	15	13

REMARKS:

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			21971	21972	21973	21977	21979	21980	21978		21974	21975
DATE			25 JUL 67	25 JUL 67	25 JUL 67	25 JUL 67	25 JUL 67	25 JUL 67	25 JUL 67		25 JUL 67	25 JUL 67
AIR-CRAFT	TYPE		A-4B	→	→	→	→	→	→		→	→
	CONFIGURATION		300 GAL & AND WING TANKS	→	→	→	→	→	→		→	→
	GROSS WEIGHT (LB)		12,300	12,200	12,000	12,500	12,200	12,000	12,400		12,000	11,900
ARG WEIGHT SETTING			14,500	14,500	14,500	14,500	14,500	14,500	14,500		14,500	14,500
TYPE LANDING			TA	TA	TA	TA	TA	TA	TA		TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	4	4	4	5	5	5	5		4	4
		REL DIR (°)	300	300	300	300	300	300	300		300	300
	TEMPERATURE (° F)		81	81	81	84	84	84	84		91	81
	PRESSURE (IN. HG)		29.850	29.850	29.850	29.810	29.810	29.810	29.810		29.850	29.850
ENGAGING SPEED (KN)			96	117	120	123	136	138	140		94	109
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0		20 P	20 P
ENGINE RPM (%)	WIRE PICKUP		85	104	84	94	98	94	106		90	86
	MAX ARG AXIAL LOAD		88	106	96	97	98	95	104		91	99
ARREST-ING HOOK	AXIAL LOAD (LB)		59,405	55,787	54,685	60,926	66,290	75,063	76,344		59,422	53,458
	TIME (SEC)		0.347	0.307	0.309	0.302	0.294	0.293	0.276		0.419	0.201
LONG. DECEL	LOAD (G)		3.473	3.469	4.381	4.795	5.352	5.727	5.810		3.032	3.906
	TIME (SEC)		0.358	0.327	0.313	0.312	0.294	0.285	0.276		0.429	0.207
CABLE TENSION	PORT (LB)		41,265	39,156	39,592	57,805	65,172	61,207	64,340		38,683	45,629
	STARBOARD (LB)		41,179	42,153	54,192	58,761	60,845	62,241	62,241		41,877	48,262
CYLINDER PRESSURE (PSI)			1466	2167	2094	2230	2358	2663	2862		1429	1784
RAM TRAVEL (IN.)			159	167	169	174	169	169	176		157	169
BATTERY POSITION (IN.)			5	5	5	5	4 3/4	4 3/4	4 3/4		5	5
DIST FROM TWO-BLOCK (KN)			28	18	18	—	—	—	—		28	18

REMARKS:

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, SINGLE Weight Setting

NATF-EN-1100

EVENT NO.			21976	21982							
DATE			25AUG67	25AUG67							
AIR-CRAFT	TYPE		A-4B	⟶							
	CONFIGURATION		300 GAL & ANS WING TANKS	⟶							
	GROSS WEIGHT (LB)		11,900	11,800							
ARG WEIGHT SETTING			14,500	14,500							
TYPE LANDING			TA	TA							
AMBIENT CON-DITION	WIND	VEL (KN)	4	6							
		REL DIR (°)	300	0							
	TEMPERATURE (° F)		81	84							
	PRESSURE (IN. HG)		29.950	29.910							
ENGAGING SPEED (KN)			125	135							
OFF-CENTER DISTANCE (FT)			20P	20P							
ENGINE RPM (%)	WIRE PICKUP		97	95							
	MAX ARG AXIAL LOAD		98	84							
ARREST-ING HOOK	AXIAL LOAD (LB)		60,803	74,469							
	TIME (SEC)		0.191	0.201							
LONG. DECEL	LOAD (G)		4.605	6.045							
	TIME (SEC)		0.195	0.208							
CABLE TENSION	PORT (LB)		53,896	54,431							
	STARBOARD (LB)		58,879	65,357							
CYLINDER PRESSURE (PSI)			2313	2422							
RAM TRAVEL (IN.)			174	174							
BATTERY POSITION (IN.)			5	43/4							
DIST FROM TWO-BLOCK (KN)			—	—							

REMARKS:

NATC-EN-1100

A-4B Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, SINGLE Weight Setting

EVENT NO.			21852	21857	21854	21856	21872	21995	21873	23546	21874	21875
DATE			13 JUL 67	13 JUL 67	13 JUL 67	13 JUL 67	14 JUL 67	28 JUL 67	14 JUL 67	15 MAR 68	14 JUL 67	14 JUL 67
AIR-CRAFT	TYPE		F-4A	→	→	→	→	→	→	→	→	→
	CONFIGURATION		WING TANKS	→	→	→	→	→	→	→	→	→
	GROSS WEIGHT (LB)		33,000	31,900	32,700	32,000	32,700	32,600	32,500	31,200	32,300	32,100
ARG WEIGHT SETTING			33,000	32,000	33,000	32,000	33,000	33,000	32,500	30,500	32,500	32,000
TYPE LANDING			TA	TA	TA	RA	RA	RA	TA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	0	0	0	0	10	5	15	–	15	15
		REL DIR (°)	0	0	0	0	240	200	270	–	270	270
	TEMPERATURE (° F)		81	81	91	81	78	76	78	–	78	78
	PRESSURE (IN. HG)		29.615	29.615	29.615	29.615	29.705	29.900	29.705	–	29.705	29.705
ENGAGING SPEED (KN)			100	110	124	127	131	133	134	135	136	105
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0	0	0	20P
ENGINE RPM (%)	WIRE PICKUP		94	88	90	83	84	94	88	92	95	88
	MAX ARG AXIAL LOAD		97	97	97	97	89	102	94	100	98	95
ARREST-ING HOOK	AXIAL LOAD (LB)		78,306	85,129	104,080	104,701	109,205	116,114	117,960	122,252	121,235	85,241
	TIME (SEC)		2.244	2.110	2.073	2.069	1.967	1.980	1.968	1.969	1.920	2.389
LONG. DECEL	LOAD (G)		2.094	2.397	2.822	2.884	3.622	3.102	3.158	3.856	3.597	2.341
	TIME (SEC)		2.454	2.318	2.288	2.228	0.912	1.980	2.126	1.964	1.957	2.591
CABLE TENSION	PORT (LB)		46,003	48,265	58,658	58,874	60,930	66,961	67,251	66,096	67,725	65,894
	STARBOARD (LB)		46,805	53,982	63,582	66,220	70,081	72,079	68,963	65,226	71,939	40,341
CYLINDER PRESSURE (PSI)			4576	4973	6161	6166	6402	6655	6991	7466	7322	5006
RAM TRAVEL (IN.)			182	179	180	180	178	–	182	183	192	181
BATTERY POSITION (IN.)			5 1/4	4 7/8	5 1/4	4 7/8	4 3/8	5	4 11/16	4 1/2	4 11/16	4 11/16
DIST FROM TWO-BLOCK (KN)			–	8	7	7	9	13	–	1	–	–

REMARKS:

NATF-EN-1100

F-18

F-4A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			21876	24143	24140	24141	24142	21996	21999	21997	24136	23545
DATE			14JUL67	24JUN68	24JUN68	24JUN68	24JUN68	28JUL67	28JUL67	28JUL67	24JUN68	15MAR68
AIR-CRAFT	TYPE		F-4A	→	→	→	→	→	→	→	→	→
	CONFIGURATION		WING TANKS	℄ AND WING TANKS	→	→	→	WING TANKS	→	→	℄ AND WING TANKS	WING TANKS
	GROSS WEIGHT (LB)		31,850	31,510	32,600	32,300	32,200	32,450	31,800	32,200	33,050	31,400
ARG WEIGHT SETTING			32,000	32,000	32,500	32,500	32,000	32,500	32,000	32,000	33,000	31,000
TYPE LANDING			TA	TA	TA	TA	TA	TA	TA	TA	FA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	10	20	20	20	20	3	7	8	10	—
		REL DIR (°)	250	270	240	240	240	240	230	0	15	—
	TEMPERATURE (° F)		78	77	77	77	77	76	76	76	75	—
	PRESSURE (IN. HG)		29.705	30.010	30.010	30.010	30.010	29.700	29.700	29.700	30.030	—
ENGAGING SPEED (KN)			115	117	126	126	129	127	132	135	136	137
OFF-CENTER DISTANCE (FT)			20P	20P	20P	20P	20P	20P	20P	25P	20P	20P
ENGINE RPM (%)	WIRE PICKUP		87	84	93	80	80	103	100	91	89	90
	MAX ARG AXIAL LOAD		95	95	95	96	97	110	106	106	94	95
ARREST-ING HOOK	AXIAL LOAD (LB)		95,858	102,189	111,021	115,439	112,904	129,187	122,456	129,889	123,585	132,112
	TIME (SEC)		2.256	2.496	1.948	2.044	1.988	1.984	1.925	2.052	1.932	1.801
LONG. DECEL	LOAD (G)		2.593	2.790	3.163	3.127	3.057	3.535	3.425	3.551	3.383	4.254
	TIME (SEC)		2.267	2.508	1.967	2.305	2.009	1.915	1.931	1.927	1.889	1.814
CABLE TENSION	PORT (LB)		73,103	76,093	80,591	84,361	77626	90,547	86,824	90,319	93274	79.693
	STARBOARD (LB)		47,279	49,393	56,432	55,816	56,945	61,422	62,890	61,890	58,379	62,308
CYLINDER PRESSURE (PSI)			5696	5914	6787	6676	6633	7629	7195	7926	7339	8035
RAM TRAVEL (IN.)			182	182	183	182	182	182	182	182	182	183
BATTERY POSITION (IN.)			4 4/16	—	—	—	—	5	5	5	5	7 1/2
DIST FROM TWO-BLOCK (KN)			—	5	4	5	4	—	—	—	5	1

REMARKS:

NATF-EN-1100

F-4A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			22163	22162	22188	22171	22168	22183	22186	22187	23104	23107
DATE			21 AUG 67	21 AUG 67	22 AUG 67	21 AUG 67	21 AUG 67	22 AUG 67	22 AUG 67	22 AUG 67	9 JAN 68	9 JAN 68
AIR-CRAFT	TYPE		F-4A	→	→	→	→	→	→	→	→	→
	CONFIGURATION		WING TANKS	→	CLEAN	WING TANKS	→	CLEAN	→	→	& AND WING TANKS	→
	GROSS WEIGHT (LB)		33,000	33,100	31,600	31,800	32,750	32,800	32,000	31,900	31,400	30,600
ARG WEIGHT SETTING			33,000	33,000	31,500	32,000	33,000	33,000	32,000	32,000	31,500	30,500
TYPE LANDING			TA	BA	TA	TA	BA	TA	TA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	4	4	5	6	6	4	5	5	–	–
		REL DIR (°)	330	330	330	000	000	000	330	330	–	–
	TEMPERATURE (° F)		79	79	79	79	79	75	75	75	–	–
	PRESSURE (IN. HG)		30.010	30.010	30.030	30.010	30.010	30.030	30.030	30.030	–	–
ENGAGING SPEED (KN)			95	109	114	120	123	127	127	127	128	131
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0	0	0	0
ENGINE RPM (%)	WIRE PICKUP		94	88	97	95	91	95	87	85	87	–
	MAX ARG AXIAL LOAD		100	91	97	98	98	98	89	89	98	–
ARREST-ING HOOK	AXIAL LOAD (LB)		79,482	86,495	94,438	109,221	107,198	111,917	106,585	106,165	114,536	120,091
	TIME (SEC)		2.220	0.648	2.220	1.831	1.796	1.999	1.991	0.233	0.636	1.967
LONG. DECEL	LOAD (G)		2.021	2.447	2.670	3.078	2.914	3.085	3.290	3.275	3.799	4.022
	TIME (SEC)		2.728	0.656	0.260	1.996	1.584	1.928	0.242	0.239	1.598	1.996
CABLE TENSION	PORT (LB)		52,546	62,753	66,934	84,394	82,212	82,237	82,065	82,292	83,686	NV
	STARBOARD (LB)		51,366	59,759	63,285	77,736	77,367	78,585	90,657	80,100	78,018	83,606
CYLINDER PRESSURE (PSI)			4310	4780	5374	6400	6151	6615	NV	6235	6434	7149
RAM TRAVEL (IN.)			177	178	178	178	178	178	178	177	179	180
BATTERY POSITION (IN.)			2 1/16	2 1/16	1 3/4	1 7/8	1 7/8	1 3/4	1 3/4	1 3/4	5 1/2	5 1/2
DIST FROM TWO-BLOCK (KN)			13	12	12	12	12	12	12	13	8	7

REMARKS:

NAVAIR-EN-1130

F-4A Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			23102		22164	23105	22172	22173	22182	22184	22169
DATE			9 JAN 68		21 AUG 67	9 JAN 68	21 AUG 67	21 AUG 67	22 AUG 67	22 AUG 67	21 AUG 67
AIR-CRAFT	TYPE		F-4A		→	→	→	→	→	→	→
	CONFIGURATION		& AND WING TANKS		WING TANKS	& AND WING TANKS	WING TANKS	→	CLEAN	→	WING TANKS
	GROSS WEIGHT (LB)		32,100		32,000	31,400	31,500	31,300	33,000	32,600	32,400
ARG WEIGHT SETTING			32,000		33,000	31,500	31,500	31,500	33,000	32,500	32,500
TYPE LANDING			TA		TA	TA	TA	TA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	-		4	-	6	6	4	4	4
		REL DIR (°)			350	-	000	000	000	300	350
	TEMPERATURE (° F)		-		79	-	77	77	75	75	79
	PRESSURE (IN. HG)		-		30.010	-	30.010	30.010	30.030	30.030	30.010
ENGAGING SPEED (KN)			132		98	117	117	121	123	124	132
OFF-CENTER DISTANCE (FT)			0		20 P	20 P	20 P	20 P	20 P	20 P	20 P
ENGINE RPM (%)	WIRE PICKUP		96		96	97	94	96	93	95	98
	MAX ARG AXIAL LOAD		98		105	101	100	85	99	102	102
ARREST-ING HOOK	AXIAL LOAD (LB)		123,475		94,248	107,663	107,776	103,362	113,309	118,306	130,946
	TIME (SEC)		1.247		2.334	0.853	2.021	0.903	1.727	1.750	1.952
LONG. DECEL	LOAD (G)		4.235		2.139	3.663	3.001	3.073	3.067	3.357	3.656
	TIME (SEC)		1.786		2.645	1.898	2.085	0.599	1.731	0.857	1.958
CABLE TENSION	PORT (LB)		81,011		60,129	87,335	75,385	85,796	88,938	87,119	92,640
	STARBOARD (LB)		83,718		49,479	61,251	70,605	69,324	63,891	69,697	81,627
CYLINDER PRESSURE (PSI)			7281		4879	6272	6374	5544	6774	6960	7516
RAM TRAVEL (IN.)			179		177	179	179	178	178	178	178
BATTERY POSITION (IN.)			5 1/2		2 1/16	5 1/2	1 7/8	1 9/16	1 3/4	1 3/4	1 7/8
DIST FROM TWO-BLOCK (KN)			8		13	8	11	12	12	12	12

REMARKS:

NATF-EN-1100

F-4A Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

			23548	23555	23540	23556	23559	23543	23553	23542	23552	23547
EVENT NO.			23548	23555	23540	23556	23559	23543	23553	23542	23552	23547
DATE			15 MAR 68	→	→	→	→	→	→	→	→	→
AIR-CRAFT	TYPE		F-4A	→	→	→	→	→	→	→	→	→
	CONFIGURATION		WING TANKS	→	→	→	→	→	→	→	→	→
	GROSS WEIGHT (LB)		32,600	31,500	32,800	31,300	30,800	31,800	32,300	32,000	32,400	32,700
ARG WEIGHT SETTING			38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000	38,000
TYPE LANDING			TA	BB	TA	TA	TA	TA	TA	TA	BA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	–	–	–	–	–	–	–	–	–	–
		REL DIR (°)	–	–	–	–	–	–	–	–	–	–
	TEMPERATURE (° F)		–	–	–	–	–	–	–	–	–	–
	PRESSURE (IN. HG)		–	–	–	–	–	–	–	–	–	–
ENGAGING SPEED (KN)			116	124	127	130	132	110	119		120	123
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	20P	20P	20P	20P	20P
ENGINE RPM (%)	WIRE PICKUP		[illegible]	93	83	92	92	91	94	76	90	93
	MAX ARG AXIAL LOAD		96	96	74	77	99	100	100	99	95	97
ARREST-ING HOOK	AXIAL LOAD (LB)		93,650	109,631	128,047	120,236	122,157	91,180	106,531	NV	104,982	114,715
	TIME (SEC)		1.376	0.982	1.006	0.972	0.929	1.065	0.934	NV	0.932	0.881
LONG. DECEL	LOAD (G)		2.524	3.255	3.093	3.575	3.570	2.430	2.913	NV	2.960	3.254
	TIME (SEC)		1.046	1.003	1.005	2.431	3.640	1.882	1.946	NV	0.917	1.562
CABLE TENSION	PORT (LB)		51,855	63,174	61,859	63,865	55,218	56,142	61,388	NV	53,745	70,210
	STARBOARD (LB)		51,004	59,757	60,761	60,615	56,441	45,105	52,030	NV	50,934	56,050
CYLINDER PRESSURE (PSI)			5238	6190	6308	6612	5995	5097	5853	NV	5790	6653
RAM TRAVEL (IN.)			178	179	176	177	178	176	179	177	178	178
BATTERY POSITION (IN.)			7½	7½	8	7½	7½	8	7½	8	7½	7½
DIST FROM TWO-BLOCK (KN)			7	7	8	8	7	8	6	7	7	7

REMARKS:

F-4A Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, SINGLE Weight Setting

EVENT NO.			21644	21645	21666	21664	21661	21668	21665		21767	21768
DATE			12 JUN67	12 JUN67	14 JUN67	14 JUN67	14 JUN67	14 JUN67	14 JUN67		26 JUN67	26 JUN67
AIR-CRAFT	TYPE		F-8D	→	→	→	→	→	→		→	→
	CONFIGURATION		CLEAN	→	→	→	→	→	→		→	→
	GROSS WEIGHT (LB)		22,000	21,700	21,700	21,400	21,700	21,400	22,000		21,900	21,800
ARG WEIGHT SETTING			22,000	22,000	21,500	21,500	22,000	21,500	22,000		22,000	22,000
TYPE LANDING			TA	TA	TA	TA	RA	TA	TA		TA	TA
AMBIENT CONDITION	WIND	VEL (KN)	5	4	5	2	4	4	4		5	5
		REL DIR (°)	315	315	170	160	135	180	180		180	180
	TEMPERATURE (° F)		—	—	64	64	—	64	64		75	75
	PRESSURE (IN. HG)		—	—	30.080	30.090	—	30.080	30.080		30.008	30.008
ENGAGING SPEED (KN)			96	99	114	132	137	138	139		102	110
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0	0		20P	20P
ENGINE RPM (%)	WIRE PICKUP		106	93	103	80	88	89	89		89	92
	MAX ARG AXIAL LOAD		106	96	104	84	92	94	92		92	93
ARRESTING HOOK	AXIAL LOAD (LB)		48,424	53,520	66,639	78,998	87,335	94,382	87,670		52,456	60,261
	TIME (SEC)		0.333	0.318	2.341	1.877	2.046	1.956	1.842		0.242	0.228
LONG. DECEL	LOAD (G)		1.341	1.644	2.162	3.044	3.046	3.490	3.441		2.142	2.386
	TIME (SEC)		0.332	0.326	0.316	0.308	0.305	0.295	0.299		0.250	2.313
CABLE TENSION	PORT (LB)		47,479	53,776	57,503	66,055	69,374	72,812	74,037		49,081	55,085
	STARBOARD (LB)		40,398	46,981	50,995	59,714	61,876	61,106	63,834		41,012	42,765
CYLINDER PRESSURE (PSI)			2344	2651	3681	4372	4947	5380	4889		2583	3263
RAM TRAVEL (IN.)			176	180	179	179	181	180	180		178	178
BATTERY POSITION (IN.)			5 1/2	5 1/2	4 5/8	4 5/8	—	4 5/8	4 5/8		3 13/16	3 13/16
DIST FROM TWO-BLOCK (KN)			—	—	—	—	—	—	—		—	—

REMARKS:

F-8D Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			21769	21956	23256	21881	23255	22546	21778 *	23257	22544	23253
DATE			26 SEP67	24 JAN 67	7 FEB 68	14 JUL 67	7 FEB 68	23 OCT 67	27 JAN 67	7 FEB 68	23 OCT 67	7 FEB 68
AIR-CRAFT	TYPE		F-8D	→	→	→	→	→	→	→	→	→
	CONFIGURATION		CLEAN	→	→	→	→	→	→	→	→	→
	GROSS WEIGHT (LB)		21,700	22,000	21,900	21,500	22,000	21,800	21,700	21,800	22,000	21,500
ARG WEIGHT SETTING			21,500	22,000	22,000	21,500	22,000	22,000	22,000	22,000	22,000	21,500
TYPE LANDING			TA	FA	TA	FA	TA	TA	FA	TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	5	4	–	10	–	–	–	–	–	–
		REL DIR (°)	120	320	–	270	–	–	–	–	–	–
	TEMPERATURE (° F)		75	69	–	78	–	–	–	–	–	–
	PRESSURE (IN. HG)		30.20A	29.93	–	29.90S	–	–	–	–	–	–
ENGAGING SPEED (KN)			126	135	136	140	142	143	143	144	147	115
OFF-CENTER DISTANCE (FT)			20P	20P	20P	20P	20P	20P	20P	20P	20P	20S
ENGINE RPM (%)	WIRE PICKUP		99	91	100	93	98	89	–	99	91	96
	MAX ARG AXIAL LOAD		99	101	100	98	99	90	–	100	90	100
ARREST-ING HOOK	AXIAL LOAD (LB)		75,067	80,467	77,460	90,263	84,719	86,433		83873	97,372	61,916
	TIME (SEC)		2.160	1.943	0.339	1.343	0.129	1.804		0.329	1.904	0.370
LONG. DECEL	LOAD (G)		3.100	2.990	3.160	3.469	3.211	3.794		3.486	4.484	2.363
	TIME (SEC)		2.183	0.173	1.921	0.353	1.817	1.956		1.922	1.865	2.238
CABLE TENSION	PORT (LB)		57,020	56,190	59,473	63,514	66,476	67,511		60,670	71,133	46,326
	STARBOARD (LB)		53,651	67,592	57,942	69,869	60,191	63,871		67,014	65,391	47,744
CYLINDER PRESSURE (PSI)			4169	4984	5125	5284	5117	5394		5469	6183	3808
RAM TRAVEL (IN.)			178	180	181	183	181	179	–	182	179	182
BATTERY POSITION (IN.)			3 13/16	5 1/4	3	4 7/16	3	5 7/8	–	3	5 7/8	3
DIST FROM TWO-BLOCK (KN)			–	6	–	–	–	7		–	7	–

REMARKS:

* The aircraft arresting-hook became disengaged from the crossdeck pendant during the arrestment.

F-8D Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.		23250	23252	23251							
DATE		7FEB68	7FEB68	7FEB68							
AIR-CRAFT	TYPE	F-8D	→	→							
	CONFIGURATION	CLEAN	— "	→							
	GROSS WEIGHT (LB)	22,000	21,700	21,900							
ARG WEIGHT SETTING		22,000	22,000	22,000							
TYPE LANDING		RA	TA	TA							
AMBIENT CON-DITION	WIND VEL (KN)	-	-	-							
	WIND REL DIR (°)	-	-	-							
	TEMPERATURE (° F)	-	-	-							
	PRESSURE (IN. HG)	-	-	-							
ENGAGING SPEED (KN)		135	140	147							
OFF-CENTER DISTANCE (FT)		20 S	20 S	20 S							
ENGINE RPM (%)	WIRE PICKUP	94	100	101							
	MAX ARG AXIAL LOAD	98	100	103							
ARREST-ING HOOK	AXIAL LOAD (LB)	72,952	78,207	97,153							
	TIME (SEC)	0.188	0.349	0.668							
LONG. DECEL	LOAD (G)	3.080	3.264	3.740							
	TIME (SEC)	2.044	1.920	1.937							
CABLE TENSION	PORT (LB)	59,646	57,629	64,865							
	STARBOARD (LB)	57,196	59,245	60,744							
CYLINDER PRESSURE (PSI)		4980	4996	5845							
RAM TRAVEL (IN.)		183	183	134							
BATTERY POSITION (IN.)		3	3	3							
DIST FROM TWO-BLOCK (KN)		6	6	5							

REMARKS:

NAT-EV-1100

F-8D Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			23079	23086	23088	23096		23089	23090	23097	23099*	23101*
DATE			8 JAN 68	8 JAN 68	8 JAN 68	9 JAN 68		8 JAN 68	8 JAN 68	9 JAN 68	9 JAN 68	9 JAN 68
AIR-CRAFT	TYPE		F-8D	—→	—→	—→		—→	—→	—→	—→	—→
	CONFIGURATION		CLEAN	—→	—→	—→		—→	—→	—→	—→	—→
	GROSS WEIGHT (LB)		22,000	21,900	21,700	22,000		21,500	21,400	21,900	21,400	22,000
ARG WEIGHT SETTING			22,000	22,000	22,000	22,000		21,500	21,500	22,000	21,500	22,000
TYPE LANDING			TA	TA	FA	FA		TA	TA	FA	FA	FA
AMBIENT CON-DITION	WIND	VEL (KN)	–	–	–	–		–	–	–	–	–
		REL DIR (°)	–	–	–	–		–	–	–	–	–
	TEMPERATURE (° F)		–	–	–	–		–	–	–	–	–
	PRESSURE (IN. HG)		–	–	–	–		–	–	–	–	–
ENGAGING SPEED (KN)			114	124	129	138		110	123	140	140	140
OFF-CENTER DISTANCE (FT)			0	0	0	0		20P	20P	20P	20P	20P
ENGINE RPM (%)	WIRE PICKUP		92	92	89	89		89	92	91		
	MAX ARG AXIAL LOAD		94	95	90	92		99	99	96		
ARREST-ING HOOK	AXIAL LOAD (LB)		66,306	78,001	86,972	98,078		63,807	78,305	101,058		
	TIME (SEC)		0.253	0.231	0.223	0.206		0.972	0.954	0.883		
LONG. DECEL	LOAD (G)		2.278	2.881	2.990	3.431		2.210	2.904	3.894		
	TIME (SEC)		0.263	0.270	0.274	0.223		0.979	2.128	0.891		
CABLE TENSION	PORT (LB)		61,157	74,423	83,018	NV		73,653	82,121	NV		
	STARBOARD (LB)		60,861	71,299	80,684	97,767		54,787	64,661	78,961		
CYLINDER PRESSURE (PSI)			3511	4688	4786	5589		3938	4883	5731		
RAM TRAVEL (IN.)			179	180	179	180		180	180	180		
BATTERY POSITION (IN.)			5 1/2	5 1/2	5 1/2	5 1/2		5 1/2	5 1/2	5 1/2		
DIST FROM TWO-BLOCK (KN)			8	7	8	7		7	7	7		

REMARKS:

* The aircraft arresting-hook became disengaged from the crossdeck pendant during the arrestment.

F-8D Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.		23109*	23100*	23108*	23110						
DATE		9JAN68	9JAN68	9JAN68	9JAN68						
AIR-CRAFT	TYPE	F-8D	→	→	→						
	CONFIGURATION	CLEAN	→	→	→						
	GROSS WEIGHT (LB)	21,600	21,300	21,900	21,100						
ARG WEIGHT SETTING		21,500	21,500	22,000	21,000						
TYPE LANDING		FA	FA	FA	FA						
AMBIENT CON-DITION	WIND VEL (KN)	-	-	-	-						
	WIND REL DIR (°)	-	-	-	-						
	TEMPERATURE (° F)	-	-	-	-						
	PRESSURE (IN. HG)	-	-	-	-						
ENGAGING SPEED (KN)		140	141	144	135						
OFF-CENTER DISTANCE (FT)		20P	20P	20P	20S						
ENGINE RPM (%)	WIRE PICKUP				94						
	MAX ARG AXIAL LOAD				98						
ARRESTING HOOK	AXIAL LOAD (LB)				91,848						
	TIME (SEC)				0.298						
LONG. DECEL	LOAD (G)				3.245						
	TIME (SEC)				0.302						
CABLE TENSION	PORT (LB)				83,538						
	STARBOARD (LB)				86,251						
CYLINDER PRESSURE (PSI)					5073						
RAM TRAVEL (IN.)					181						
BATTERY POSITION (IN.)					5 1/2						
DIST FROM TWO-BLOCK (KN)					6						

REMARKS:

* The aircraft arresting-hook became disengaged from the crossdeck pendant during the arrestment.

F-8D Aircraft, Mark 7 Mod 3 Arresting Gear WITH-OUT Sheave Dampers, ACTUAL Weight Setting

EVENT NO.			22007	22008	22043	23260	22045	23261		22010	22009	22047
DATE			1 AUG 67	1 AUG 67	8 AUG 67	7 FEB 68	8 AUG 67	9 FEB 68		1 AUG 67	1 AUG 67	23 OCT 67
AIR-CRAFT	TYPE		F-8D	→	→	→	→	→		→	→	→
	CONFIGURATION		CLEAN	→	→	→	→	→		→	→	→
	GROSS WEIGHT (LB)		21700	21800	21600	21,300	21,000	21,200		21,500	21,600	21,700
ARG WEIGHT SETTING			25,000	25,000	25,000	25,000	25,000	25,000		25,000	25,000	25,000
TYPE LANDING			RA	RA	FA	FA	FA	TA		TA	TA	TA
AMBIENT CON-DITION	WIND	VEL (KN)	6	0	4	-	4	-		0	0	-
		REL DIR (°)	030	000	210	-	210	-		0	0	-
	TEMPERATURE (° F)		80	80	-	-	-	-		80	80	-
	PRESSURE (IN. HG)		-	-	30.008	-	30.008	-		-	-	-
ENGAGING SPEED (KN)			115	129	140	142	143	144		122	123	127
OFF-CENTER DISTANCE (FT)			0	0	0	0	0	0		20P	20P	20P
ENGINE RPM (%)	WIRE PICKUP		86	93	97.3	96	91	97		99	100	94
	MAX ARG AXIAL LOAD		88	96	101	97	96	100		100	100	98
ARREST-ING HOOK	AXIAL LOAD (LB)		61,536	72,166	88,754	85,764	66,649	86,722		68,597	69,808	76,781
	TIME (SEC)		0.311	0.310	0.285	0.257	0.745	0.723		1.063	1.061	1.007
LONG. DECEL	LOAD (G)		2.613	3.070	3.637	3.209	3.406	3.472		2.776	2.851	3.054
	TIME (SEC)		0.328	0.317	0.294	0.295	0.273	0.483		1.073	1.067	1.529
CABLE TENSION	PORT (LB)		52,497	NV	68,433	62,900	69,455	65,714		NV	NV	56,427
	STARBOARD (LB)		52,702	59,836	NV	67,462	72,268	68,734		52,737	52,559	55,201
CYLINDER PRESSURE (PSI)			3095	NV	4603	4807	4404	4922		NV	NV	4118
RAM TRAVEL (IN.)			176	176	179	179	179	178		173	173	176.
BATTERY POSITION (IN.)			4 1/16	4 1/16	4 1/4	3	4 1/4	3		4 1/16	4 1/16	5 7/8
DIST FROM TWO-BLOCK (KN)			—	—	—	—	—	—		—	—	—

REMARKS:

NATF-EN-1100

F-8D Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, SINGLE Weight Setting

EVENT NO.			22079 •	22046	23265	22048	23262	23263			
DATE			8 AUG 67	8 AUG 67	7 FEB 68	8 AUG 67	7 FEB 68	7 FEB 68			
AIR-CRAFT	TYPE		F-8D	→	→	→	→	→			
	CONFIGURATION		CLEAN	→	→	→	→	→			
	GROSS WEIGHT (LB)		21,800	20,600	20,500	19,900	21,000	20,900			
ARG WEIGHT SETTING			25,000	25,000	25,000	25,000	25,000	25,000			
TYPE LANDING			FA	FA	FA	FA	FA	FA			
AMBIENT CON-DITION	WIND	VEL (KN)	5	4	–	4	–	–			
		REL DIR (°)	120	210	–	210	–	–			
	TEMPERATURE (° F)		70	–	–	–	–	–			
	PRESSURE (IN. HG)		30.060	30.000	–	30.000	–	–			
ENGAGING SPEED (KN)			130	136	138	139	141	141			
OFF-CENTER DISTANCE (FT)			20P	20P	20P	20P	20P	20P			
ENGINE RPM (%)	WIRE PICKUP		–	94.5	95	87	100	101			
	MAX ARG AXIAL LOAD		–	94.5	96	89	101	101			
ARREST-ING HOOK	AXIAL LOAD (LB)		77,273	NV	76,478	84,854	82,763	85,690			
	TIME (SEC)		1.618	NV	0.204	0.187	0.711	0.698			
LONG. DECEL	LOAD (G)		3.036	2.987	3.083	3.770	3.330	3.409			
	TIME (SEC)		0.401	0.346	1.926	0.194	0.718	0.702			
CABLE TENSION	PORT (LB)		56,383	72,157	57,501	72,057	61,251	60,356			
	STARBOARD (LB)		62,201	62,637	60,721	61,912	62,084	64,536			
CYLINDER PRESSURE (PSI)			4307	4363	4795	4201	4842	4910			
RAM TRAVEL (IN.)			173	179		179	179	179			
BATTERY POSITION (IN.)			3 1/2	4 1/4	3	4 1/4	3	3			
DIST FROM TWO-BLOCK (KN)			16	–	–	–	–	–			

REMARKS:

• Nose-Gear Steering Stud, PN 548527-1, failed.

E-8D Aircraft, Mark 7 Mod 3 Arresting Gear WITH Sheave Dampers, SINGLE Weight Setting

NATF-EN-1100

E-29

Event No.			24114	24131	24134	24132	24133	24135	24117 †	24137	24115 †	24136	24138 ‡
1968 Date			6/20	2/61	6/20	6/21	6/20	6/21					
Aircraft	Type		F-4A										
	Configuration		Ctr-line & Wing Tanks										
	Gross Weight (Lb)		32,500	33,000	31,500	32,400	32,000	30,900	31,000	32,500	32,000	33,000	31,800
ARG Weight Setting (Lb)			32,500	33,000	31,500	32,500	32,000	31,000	31,000	32,500	32,000	33,000	32,000
Type Landing			Fly-in										
Ambient Condition	Wind	Velocity (Kn)	10	8					14	10			
		Rel Dir (Deg)	15										
	Temperature (° F)		70	74					73	75	70	75	
	Pressure (In. HG)		29.825	29.925					29.805	30.030	29.825	30.030	
Engaging Speed (Kn)			127	-	126	-	-	128	118	134	119	136	130
OFF-CENTER Distance (Ft)			0		10 P	0		10 P	0			20 P	10 P
Engine RPM(%)	Wire Pickup		-	85	86	85	88	86	-	87	-	89	87
	Max ARG Axial Load		-	94	95	93	95	94	-	94	-	94	94
Glide Slope (Deg)			3										
Arresting-Hook Touchdown Pt Before Deck Pendant (Ft)			80	75		60			25		10		5 or less
*Stabilator Position at Wire Pickup (%)			100		98	99	100		32	98	99	97	60

* Percent travel from full nose down position
† Crossdeck pendant impacted leading edge of port stabilator
‡ Crossdeck pendant impacted leading edge of port and starboard stabilators

APPENDIX C - TABULATED DATA FOR F-4A AIRCRAFT FLY-IN ARRESTMENTS

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13. ABSTRACT

Presents results of tests conducted with the Mark 7 Mod 3 arresting gear to determine aircraft compatibility and evaluate arresting-gear performance. Instrumented A-3A, A-4B, F-4A, and F-8D aircraft were utilized in the test program. Test data was obtained for use in the preparation of aircraft recovery bulletins for the USS JOHN F. KENNEDY (CVA67) and to insure compatibility of current fleet aircraft with the Mark 7 Mod 3 arresting gear.

Testing was conducted with three basic arresting-gear configurations/operating modes: (1) arresting gear with sheave dampers, using actual weight settings; (2) arresting gear without sheave dampers, using actual weight settings; and (3) arresting gear with sheave dampers, using single weight settings.

Compatibility with A-3A and A-4B aircraft and qualified compatibility with F-4A and F-8D aircraft has been established.

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14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
ARRESTING GEAR (AIRCRAFT, RECOVERY)						
NAVAL AIRCRAFT						
JET BOMBERS						
ATTACK BOMBERS						
JET FIGHTERS						
PERFORMANCE (ENGINEERING)						
COMPATIBILITY TESTS						